



S. 27. A. 3.

CHESTER

Society of Natural Science & Literature

(Founded by Charles Kingsley, 1871.)

TWENTY-SIXTH
ANNUAL REPORT

AND

STATEMENT OF ACCOUNTS,

FOR THE YEAR 1896-97.



CHESTER:

PRINTED BY G. R. GRIFFITH, GROSVENOR STREET.

MDCCXCVII.



CHESTER SOCIETY
OF
NATURAL SCIENCE AND LITERATURE

(FOUNDED BY CHARLES KINGSLEY, 1871.)



TWENTY-SIXTH
ANNUAL REPORT

AND

STATEMENT OF ACCOUNTS FOR 1896-97,

AND THE

LIST OF MEMBERS FOR 1897-98;

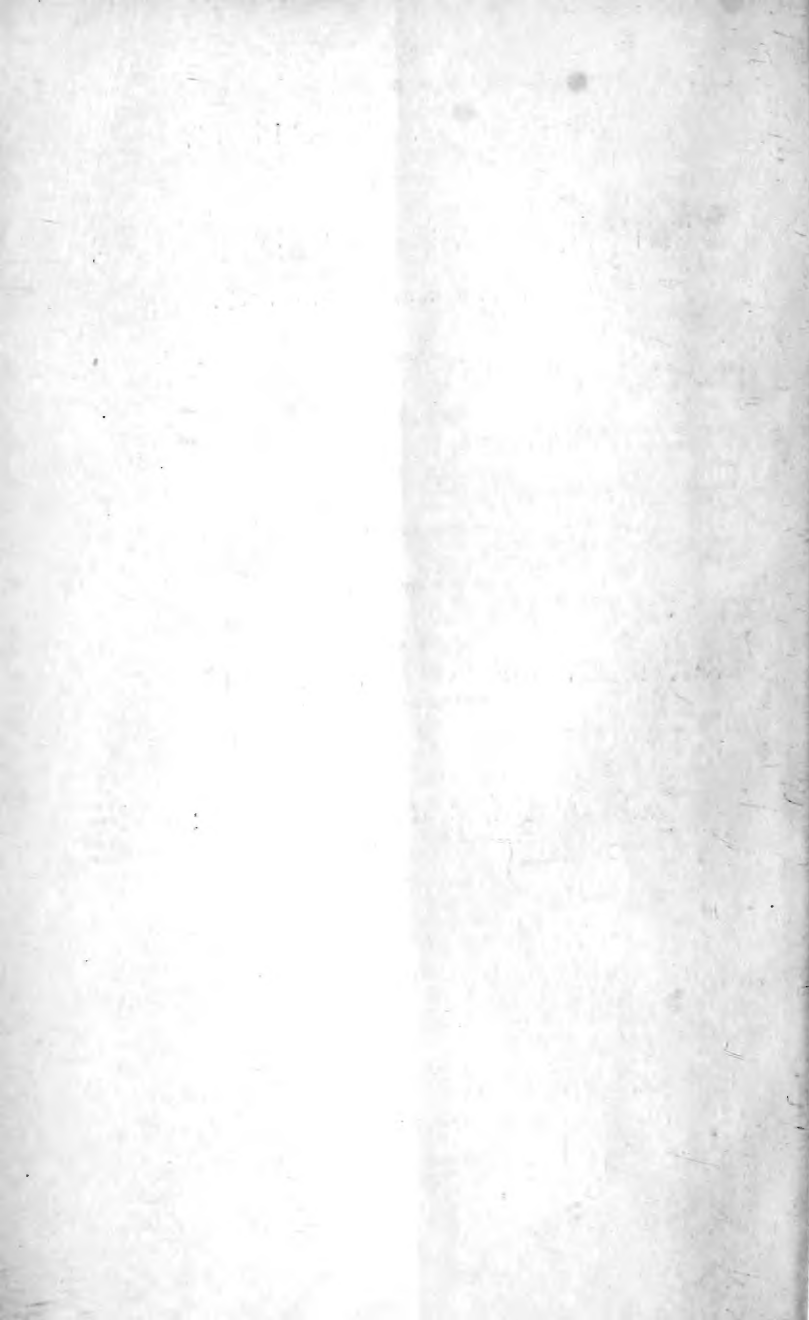
ALSO

A LIST OF THE KINGSLEY MEMORIAL PRIZES
OFFERED FOR COMPETITION, &c.

CHESTER:

PRINTED BY G. R. GRIFFITH, "THE CASTLE" PRINTING WORKS.

MDCCCXCVII.



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MR. R. NEWSTEAD, F.E.S., *The Grosvenor Museum*.

Assistant-Secretary:

MR. T. HIGGINSON.

RULES.

1.—That the Title of this Society be "*The Chester Society of Natural Science and Literature*," and that its objects be the promotion of the study of Natural Science and Literature by Lectures, Field Meetings, the Reading and Discussion of Papers, and other suitable means.

2.—That the Officers be a President, Eight Vice-Presidents, Treasurer, One Scientific Secretary, Two General Secretaries, a Chairman and Secretary for each Section (nominated by the Section), and a Librarian.

3.—That the Committee consist of the above-named Officers, and of Twelve other Members of the Society; and that the practical management of the Society be vested in such Committee, subject to the following Rules:—

4.—The name of any Candidate for Membership of the Society, with those of a Proposer and a Seconder, must be sent in writing to the Secretaries or Treasurer for the Committee, and shall be by them submitted for election at the next ensuing General Meeting; and when elected the Candidate shall become a Member upon payment of the Annual Subscription.

5.—That the Subscription be 5/- per annum, payable in advance, and due the 1st of May in each year. Any person duly elected may become a Life Member upon payment of £5.

6.—That distinguished scientific men, or any persons who may render special service to the Society, may be elected Honorary Members or Corresponding Members, on nomination by the Committee. The number of Honorary Members may not exceed Thirty.

7.—That each Member shall be allowed to introduce one *non-resident* friend at any of the General Meetings, except at the Annual General Meeting; but a Member may introduce a friend, whether resident in Chester or not, at any of the Sectional Meetings. The Chairman and Secretary of each Section, may, on application, allow a Member to introduce more than one friend to their own Sectional Meetings.

8.—That any Member desirous of withdrawing from the Society, shall give notice (in writing) to either of the General Secretaries, before the end of the financial year. In the absence of such written notice the Member shall be liable for the current year's Subscription and all arrears.

9.—The names of Members whose Subscriptions are two years in arrear, after a final application has been made by the Secretaries or Treasurer, shall be erased from the list of Members.

10.—A General Meeting shall have the power of expelling any Member whose conduct they deem objectionable, providing special notice has been given on the Society's Circular convening the Meeting, and that at least two-thirds of the Members present agree thereto.

11.—That the Committee shall meet monthly for the despatch of business. Five Members shall form a quorum.

12.—That the Committee shall arrange General Field Meetings during the year. The place of Meeting shall be fixed by the Committee, and due notice be given by the General Secretaries. In case of bad weather, the Members of the Committee present shall decide whether such Meetings be postponed or not.

13.—That the Committee shall also arrange at least six General Evening Meetings in the year, at which papers shall be read and discussed. No paper shall be read without the previous sanction of the Committee. Objects of scientific interest may be exhibited at these Evening Meetings.

14.—That the Annual General Meeting of the Society shall be held in the month of May. At this Meeting the Officers and Committee of the Society, and two Auditors for the ensuing year, shall be elected. If the number of nominations for any office exceeds the number of vacancies the election shall be by Ballot. The Officers' Reports and Financial Statement, made up to the end of April, and duly audited, shall also be submitted, and read if desired.

15.—Nominations for the Committee and Auditors shall be sent in writing to either of the General Secretaries at least ten clear days previous to the Annual General Meeting.

16.—The names of all persons to be submitted to the Annual General Meeting as Officers and Committee, and also all Financial Statements and any proposed alterations of Rules, shall be posted on the Notice Board in the Vestibule of the Museum, at least six clear days previous to the Annual General Meeting, for the information of Members, who shall be apprised of such publication on the Notice convening the Meeting.

17.—The Committee shall fill any vacancy that may occur before the next Annual General Meeting.

18.—Any proposed alterations in the above Rules shall be notified to either of the General Secretaries at least ten clear days before the Annual General Meeting, and shall only be adopted if sanctioned by at least two-thirds of the Members present. No alteration in these Rules shall otherwise be made.

ANNUAL REPORT.



THE time has again arrived when your Committee have the pleasure of presenting the Members with a Report of what has taken place during the past year.

The Society has now been in existence for twenty-six years, and this fact alone shows that its vitality is strong.

The number of its Members keeps to a high standard, proving that young life is entering our ranks. We have lost by death and removal about forty Members, but have added to our list the names of 105 new Members.

Our Honorary Members have been augmented by names of European reputation, while we still retain amongst us many of those who were associated with our Society from its commencement.

During the Summer of last year much took place in and about Chester, which proved of great and general interest to our Members. The Home Reading Union made Chester the centre for its Annual Meeting. The British Pharmaceutical Conference, and the Arboricultural Society of Great Britain also met here. The Chester Horticultural Show on the Roodee was well attended; and last, but not least, The British Association Meeting, at Liverpool, proved a great attraction.

All these interests, to a certain degree, prevented our Society from carrying out its usual programme of Summer Excursions, but this was quite compensated for by the fact that our Members had opportunities of joining other Societies, and acquiring extension of experience and knowledge so essential to the vitality of Natural Science in all its branches.

The financial position of our Society will be placed before you by our Treasurer, MR. SIMON.

The Library is in good order, and we have to thank many friends for valuable contributions.

The Museum keeps up its high efficiency and admirable order, thanks to the untiring energy of our Curator. There will be a full report of the gifts and additions made within the last year; for many of these we have to thank our Curator.

The Annual Account of the Kingsley Memorial Fund will be brought before you by MR. E. J. BAILLIE.

Thanks to the Museum Management Committee the Lecture Theatre has been much improved, both with regard to the arrangement of the seats and the putting up of a new table for the Lecturer. Your Committee trust that the room, as it now stands, offers a convenient place of meeting for all Members.

We must now enter on the arrangements made by the Committee for carrying on the work of the past year. This will be considered under the following heads:—EXCURSIONS, CONVERSAZIONE, LECTURES, and SECTIONAL MEETINGS.

For reasons before stated there were only four Summer Excursions in 1896—

1896.

May 20th.....Chester Waterworks.

June 17th.....Bethesda Slate Quarries and Penrhyn Castle.

July 8th.....Delamere Forest and Meres.

„ 22nd.....Sandycroft Engineering Works, and Chemical
Works of MESSRS. J. TURNER & Co.,
LIMITED.

The Excursion to the Bethesda Slate Quarries was well attended, and proved a most enjoyable day. The arrangements were all well carried out, thanks to LORD PENRHYN'S Quarry Manager, E. A. YOUNG, ESQ., and COL. THE HON. W. E. SACKVILLE WEST, Agent to the Estate. Our Members had thus an opportunity of going over some most interesting scenery, as well as visiting Penrhyn Castle and Gardens.

The Committee found it advisable not to have any Excursions in August, owing to so many Members being away from Chester during that month.

In September the British Association met in Liverpool, and made two visits to Chester. On the 19th—on their way to Hawarden; and on the 24th to Eaton. On the latter date we asked the Members of the Association to our Annual *Conversazione*, which was held somewhat earlier than usual, in order that we might have the pleasure of meeting some of the distinguished visitors who are always present at the British Association Meetings. Amongst them was PROFESSOR T. MCKENNY HUGHES, one of our former Presidents; also PROFESSOR DE CANDOLLE, from Switzerland, who represents a long line of distinguished Botanists. The Meeting was well attended, and the Kingsley Memorial Medal was presented by the COUNTESS GROSVENOR to the REV. A. H. FISH for original work done by him in the district. A grant from the Kingsley Memorial Fund was made to MR. ALFRED NEWSTEAD for his collection of Water-beetles, and other life-histories of various Insects. One of the great attractions of the gathering was a demonstration of the X-Rays of PROFESSOR RÖNTGEN, who was elected an Honorary Member of our Society, but, unfortunately for us, he was not able to be present. MR. FISH, however, was an able exponent of the wonderful discovery, and spared neither time nor expense in exhibiting it to perfection. The whole of the Museum was thrown open to the Members, so that not only had they the opportunity of seeing their own collections, but also those of the Archæological Society, the Art Gallery, and the students at work in the Technical Schools. There was a fair display of Photographic work by the Members of the Photographic Section. A collection of cut Herbaceous Flowers made an exquisite show, which delighted the heart of every true lover of Botany. There was also an exhibition of Microscopic objects, and other Scientific Instruments.

The past Winter has been one of unusual activity in the way of Lectures. Not only have there been seven General Meetings with Lectures, but there have been several Special Lectures, and these on very interesting subjects—

THE GENERAL LECTURES.

1896.

Oct. 29th—"The Recent Total Eclipse," by SIR ROBERT BALL, F.R.S.

Nov. 26th—"A Cruise with a Camera," and "Standing 'neath the Shadow of the Moon," by F. W. LONGBOTTOM, ESQ., M.B.A.A.

1897.

Jan. 6th—"Impressions of South Africa," by GEO. WYNDHAM, ESQ., M.P.

Jan. 28th—"Lavoisier and his work," by ED. DAVIES, ESQ., F.C.S., F.I.C.

Feb. 25th—"The Constitution and Composition of the Earth's Atmosphere," by the REV. A. H. FISH, B.A., B.Sc.

Mar. 25th—"Shooting Stars," by the REV. FATHER A. L. CORTIE, S.J., F.R.A.S.

Apr. 29th—Annual General Meeting—"An Exhibition of the Birds in the Society's Museum, on Lantern Slides," given by MR. R. NEWSTEAD, F.E.S.

SPECIAL MEETINGS.

1896.

Dec. 10th—"Electric Lighting and Power," by DR. N. S. KEITH, M.I.E.E.

1897.

Jan. 6th—"The Air we Breathe" (for our Young People), by MR. J. A. McMICHAEL, B.A., B.Sc.

Jan. 14th—"From Mont Blanc to the Matterhorn," by W. LAMOND HOWIE, ESQ., F.C.S.

Mar. 9th—"Salmonidæ," by MAJOR LEADBETTER, Hon. Secretary of the River Dee Fishery Board.

All these Lectures were well attended, and of especial interest. Most of the Lectures have been illustrated by the Lantern, which is of great use, and brings before the eye of the audience the object described, and thus another sense is called into play; and for great improvement of the slides we have to thank the Photographer.

There have been, during the Winter, two Free Courses of Elementary Lectures—one Course on Geology, the other on Chemistry; these have been under the management of MR. A. W. LUCAS and MR. J. BAIRSTOW. The Committee consider these Lectures have been very valuable, acting as a stimulus to young people; in many cases rousing them

to a sense of how much there is to learn, and inducing them to turn to books for further information, to say nothing of the advantage of a good grounding before attending the more advanced Lectures given by the different Sections.

The Sections into which the Society is divided have met week by week during the past Winter, and a report of these Meetings will be given by the Secretaries of the different Sections.

Your Committee have met fifteen times during the past year to arrange for the carrying on of the general work of the Society, which has increased numerically to a considerable extent. This, your Committee feel, will necessitate an increase in *their* number, and a motion to this effect will be brought before you, as it is felt that the more the Members can be induced to take an active part in the working of the Society, the more its efficiency will be promoted. The very object for which the Society exists, is to instill a love of Natural Science, and it is hoped that in the coming year good work may be done in tabulating and recording what is perpetually going on around us, which only awaits to be made use of to lead us on to more perfect knowledge.

Your Committee take this opportunity of thanking all those who, by gifts and specimens and records of observation, have enriched the Museum; we must also thank those who, by reading Papers before the Society, have helped to make the past Winter Session a success.

Our thanks are also due to the donors of Books to the Library, and all those who so kindly assisted at the Annual Conversazione.

The Committee again ask the Members for their indulgence as to things done or omitted, feeling that in a large Society there must be some faults both of commission and omission; but if the Members will only take an interest

in the *working* of the Society, this will, in a great measure, cure itself; and the Society, as time goes on, will continue to show itself a strong power amongst us, and justify all the trouble and expense so liberally given, which have so far made its prosperity in past years.

HENRY STOLTERFOTH, M.A., M.D.,

Hon. Scientific Secretary.

APRIL 29th, 1897.

ANNUAL MEETING, APRIL 29TH, 1897.

The Reports and Accounts for the past year were submitted and adopted;

A proposition to increase the number of Elective Members on the Committee, from six to twelve, was adopted;

On the Motion of the retiring President (DR. STOLTERFOTH), Seconded by MR. J. D. SIDDALL, MR. THOMAS SHEPHEARD, F.R.M.S., was unanimously elected President of the Society for the ensuing year;

MR. SHEPHEARD delivered his Presidential Address;

The following were elected on the Committee for the ensuing year:—
Mr. F. W. Longbottom, Mr. E. J. Baillie, Mr. J. Bairstow, Dr. W. Henry Dobie, Mr. J. L. Denson, Mr. H. Duckworth, Mr. E. Hodgkinson, Rev. J. L. Bedford, Dr. King, Mr. J. Day, Mr. H. B. Dutton, and Mr. E. G. Ballard.

Resolved:—

“That the Kingsley Memorial Medal for the present year be awarded
“to Dr. W. Hy. Dobie, at the forthcoming Annual Conversazione.”

Resolved:—

“That it be a direction to the Committee to take into consideration the
“revision of the Rules, and to report any alterations they may
“think fit to this Meeting; and that this Meeting be adjourned
“*sine die*.”

A very hearty vote of thanks was accorded to the Honorary Secretaries for their successful conduct of the Society's affairs.

ADJOURNED ANNUAL MEETING, MAY 20TH, 1897.

THE CHAIRMAN read Letters from MR. G. R. GRIFFITH and MR. G. P. MILN, resigning their positions as Hon. General Secretaries of the Society, and explained that for personal reasons MR. GRIFFITH had been unable to see his way to withdraw his resignation.

Resolved:—

“That MR. GRIFFITH's resignation be received with the deepest regret,
“and that the heartiest thanks of the Society be tendered to him
“for his long and invaluable services.”

Resolved :—

“ That MR. GRIFFITH be elected a Vice-President of the Society.”

THE CHAIRMAN notified that MR. MILN had kindly consented to withdraw his resignation, and it was

Resolved :—

“ That MR. W. F. J. SHEPHEARD be appointed Co-Secretary with

“ MR. MILN ; and that MR. T. HIGGINSON be appointed

“ Assistant-Secretary.”

The Revised Rules drawn up by the Committee were formally adopted, with slight alterations (*see page 4.*)

A warm vote of thanks was awarded MR. MILN for his past services to the Society, and for his kindness in withdrawing his resignation.

CURATOR'S REPORT.

THE work of the past year has been of a somewhat varied character as no effort has been made in the collection or preparation of any special branch or department of the Museum. A quantity of material has, however, been acquired, which will, in the course of another year, make very attractive exhibits. In collecting expeditions to Arenig, Cefn, and elsewhere, your Curator was successful in obtaining valuable material, and in soliciting aid from persons more or less interested in Natural History.

We tender our sincere thanks to MESSRS. R. J. SMITH (Aldford) and JNO. ROBERTS (Bala) for the interest taken in the work of the Museum, both by the collecting of specimens, and soliciting of help from others. MESSRS. CHAS. OLDHAM and T. A. COWARD (two of our Corresponding Members), are constantly making valuable additions to the *Vertebrata*, &c. MESSRS. J. ARKLE and GEO. O. DAY have added considerably to the *Lepidoptera*, both in additional species and in the renewal of old series. MR. ALFRED NEWSTEAD has done good work in the *Coleoptera* and other branches of Zoology ; his Kingsley Memorial Collection of *Coleoptera* has been added to the permanent collection. The work of your Curator has so frequently been brought before

the Members of the Society, in the form of illustrated lectures, that it is needless to repeat it in this Report.

Collections, illustrating Geology and Zoology, have been loaned to several Institutions for lecturing purposes; and we now have in progress the formation of a collection of Geological specimens, which will also be loaned to the various schools in the City for educational purposes.

MR. A. O. WALKER'S valued loan of Reference Works still remains with us; and for which we tender our sincere thanks. Our President (DR. STOLTERFOTH) and DR. W. H. DOBIE have also lent books of reference for the identity of various orders of Zoology.

ABSTRACT OF THE REPORT.						Species Presented.	Total of Species.	Total of Specimens.
Botany	..	..	..	..	..	100	100	100
Hydrozoa	..	..	..	..	..	3	3	16
Crustacea (Shrimps, &c.)	..	..	..	..	..	14	14	51
Aracnida (Spiders)	..	..	..	..	..	1	1	1
Orthoptera (Cockroaches)	..	..	..	..	..	2	2	13
Thysanura (Bristle-tails, Fish, Moths, &c.)	..	..	..	..	..	3	3	23
Homoptera (Scale Insects, &c.)	..	..	..	..	..	3	3	10
Lepidoptera (Moths and Butterflies)	..	..	..	..	..	102	102	330
Coleoptera (Beetles)	..	..	..	..	..	67	67	192
Neuroptera (Dragon Flies, &c.)	..	..	..	..	..	2	2	2
Diptera (Two-winged Flies)	..	..	..	..	..	9	9	15
Hymenoptera (Bees and Wasps, &c.)	..	..	..	..	..	20	20	51
Polyzoa	..	..	..	..	..	1	1	1
Mollusca (Shells, &c.)	..	..	..	..	..	9	9	20
Pisces (Fish)	..	..	..	..	..	6	6	12
Amphibia (Newts)	..	..	..	..	..	1	1	5
Aves (Birds)	..	..	..	..	..	45	45	52
Nest and Eggs	..	..	..	..	..	18	18	44
Mammalia	..	..	..	..	..	10	10	12
Geology	..	..	..	..	..	32	32	64
Miscellaneous	..	..	..	..	..	—	—	8
TOTAL						448	448	1,022

LIST OF DONORS AND ADDITIONS.

AMPHIBIA (Newts, &c.)

Mr. Charles Oldham	Species.	Specimens.
						1	5

ARACNIDA (Spiders, &c.)

Mr. Durrant	1	1
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AVES (Birds, &c.)

	Species.	Specimens.
Mr. Birch	1	1
Mr. Bonnalie	1	1
Mr. E. Comber	19	20
Colonel B. G. Davies-Cooke	1	1
Mr. T. A. Coward	2	2
Dr. W. H. Dobie	1	1
Mr. Edwards	1	1
Mr. Councillor Jones	1	1
Mr. Large	1	1
Curator R. Newstead	3	3
Messrs. R. Newstead (junr.) and R. Cockrill	1	1
Mr. Charles Oldham	1	4
Mr. Roberts	2	4
Mr. H. E. Sharp	1	1
Mr. R. J. Smith	8	9
His Grace The Duke of Westminster, K.G.	1	1

BOTANY.

Mr. Cyril Punch	100	100
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COLEOPTERA (Beetles.)

Mr. F. R. Bolland	2	20
Mrs. Carstairs Jones	1	1
Mr. Charles E. Mann	2	11
Curator R. Newstead	4	10
Mr. Charles Oldham	11	14
Mr. T. Walmsley Price	1	1
Dr. Russell	2	5
Mr. W. F. J. Shephard	1	1
Mr. R. J. Smith	3	3
Mr. B. Tomlin	1	5
Mr. A. O. Walker	16	20

CRUSTACEA (Shrimps, &c.)

Mr. F. R. Bolland	8	21
Mr. J. D. Siddall	1	20
Mr. A. O. Walker	3	7
Dr. White	2	3

DIPTERA (Two-winged Flies.)

Mr. Johnson Dickson	1	1
Mr. Johnson	1	1
Curator R. Newstead	1	3
Mr. A. Newstead	1	2
Mr. Charles Oldham	1	3
Dr. Russell	1	1
Mr. A. O. Walker	2	3
Dr. White	1	1

GEOLOGY.

						Species.	Specimens.
Mr. F. F. Brown .. .. .	..	..	..	..	..	1	— 1
Mr. Bycott .. .. .	..	..	..	..	..	3	— 9
Col. B. G. Davies Cooke .. .. .	..	..	..	..	..	2	— 2
Mr. T. B. Ffoulkes .. .. .	..	..	..	..	..	20	— 40
Sergeant E. Myddleton .. .. .	..	..	..	..	..	1	— 1
Curator R. Newstead .. .. .	..	..	..	..	..	1	— 5
Mr. R. Parker .. .. .	..	..	..	..	..	1	— 1
Miss Parsons .. .. .	..	..	..	..	..	1	— 1
Mr. S. Youd .. .. .	..	..	..	..	..	2	— 4

HOMOPTERA (Scale Insects, &c.)

Mr. E. J. Baillie	1	— 1
Mr. N. F. Barnes	1	— 3
Mr. A. T. Gillanders	1	— 6

HYDROZOA.

Mr. F. R. Bolland	3	— 16
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HYMENOPTERA (Bees, Wasps, &c.)

Mr. E. J. Baillie	1	— 1
Mr. Jeffrey	3	— 16
Mr. Johnson	1	— 2
Mr. A. Newstead	1	— 1
Curator R. Newstead .. .. .	..	..	..	..	..	1	— 1
Mr. Chas. Oldham .. .. .	..	..	..	..	..	3	— 7
Mr. R. J. Smith .. .. .	..	..	..	..	..	3	— 3
Mr. A. O. Walker .. .. .	..	..	..	..	..	5	— 8
Dr. White .. .. .	..	..	..	..	..	2	— 12

LEPIDOPTERA (Moths and Butterflies.)

Mr. J. Arkle .. .. .	..	..	..	..	..	48	— 175
Mr. G. O. Day .. .. .	..	..	..	..	..	24	— 78
Mr. F. T. Farrimond .. .. .	..	..	..	..	..	1	— 1
Mr. Gardner .. .. .	..	..	..	..	..	1	— 6
Miss Massey .. .. .	..	..	..	..	..	1	— 1
R. Newstead (junr.) .. .. .	..	..	..	..	..	1	— 1
Curator R. Newstead .. .. .	..	..	..	..	..	1	— 1
Mr. Chas. Oldham .. .. .	..	..	..	..	..	6	— 34
Mr. Prince .. .. .	..	..	..	..	..	2	— 12
Mr. Shephard .. .. .	..	..	..	..	..	1	— 1
Mr. R. J. Smith .. .. .	..	..	..	..	..	15	— 19
Miss L. E. Tomlin .. .. .	..	..	..	..	..	1	— 1

MAMMALIA (Animals.)

						Species.	Specimens.
Mr. R. C. Brierley..	..	..	..	..	..	I	— I
Mr. T. R. Hodges..	..	..	..	..	..	I	— I
Curator R. Newstead	..	.	..	..	..	I	— I
Mr. R. Newstead (senr.) ..	..	..	..	..	..	I	— I
Mr. Francis Nicholson	..	..	..	..	..	I	— 2
Mr. Chas. Oldham..	..	..	..	..	..	I	— I
Miss Payne..	..	..	..	..	..	I	— I
Mr. Simpson	..	..	..	..	..	I	— I
Mr. R. J. Smith	..	..	..	..	..	I	— I
Mr. A. O. Walker..	..	..	..	..	..	I	— 2

MOLLUSCA (Shells, &c.)

Mr. F. R. Bolland	..	..	..	..	..	2	— 12
Mr. Chas. Oldham..	..	..	..	..	..	7	— 8

NESTS AND EGGS.

Mr. S. Clegg	..	..	..	..	..	2	— 7
Mrs. Kenyon	..	..	..	..	..	I	— I
Miss Massey	..	..	..	..	..	I	— 2
Curator R. Newstead	..	..	..	..	..	I	— 3
Mr. H. Nicholson	..	..	..	..	..	I	— I
Mr. J. H. Roberts..	..	..	..	..	..	I	— I
Mr. S. F. Rowland	..	..	..	..	..	I	— 3
Mr. R. J. Smith	..	..	..	..	..	10	— 26

NEUROPTERA (Dragon Flies, &c.)

Mr. F. F. Brown	..	..	..	..	..	I	— I
Mr. R. J. Smith	..	..	..	..	..	I	— I

ORTHOPTERA (Cockroaches, &c.)

Curator R. Newstead	I	— 12
Mr. H. Viggers	I	— I

PISCES (Fish, &c.)

Mr. F. R. Bolland..	6	— 12
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POLYZOA.

Mrs. Payne..	I	.. I
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MISCELLANEOUS.

Dr. Stolterfoth	6
Mr. G. Watmough Webster	I

THYSANURA (Bristle-tails.)

Miss Lloyd	..	..	..	..	..	I	.. 20
Dr. White	..	..	..	..	..	2	.. 5

ROBT. NEWSTEAD, F.E.S.,

Curator.

APRIL 29th, 1897.

SECTIONAL REPORTS.

BOTANICAL.

A PAPER entitled "The Natural History of the principal Food Plants," was given by the Chairman of the Section (MR. J. D. SIDDALL), on February 11th.

A. E. GOODMAN,

APRIL 29th, 1897.

Secretary.

ZOOLOGICAL.

Two Meetings of the Section were held on the following dates:—

1897.

Mar. 11th—"Notes and Observations on the *Fauna* of the District," by the following Members of the Society:—MR. ALFRED O. WALKER, F.L.S., on *Crustacea*, &c.; DR. W. H. DOBIE, on Birds; MR. J. ARKLE, on *Lepidoptera*; The Curator (MR. R. NEWSTEAD), on Animal Life in the Tremearchion and Cefn Caves, &c.

MR. WALKER read a communication from DR. RUSSELL relating to the Zoology of the Colwyn Bay District; and also communicated many records of Marine Zoology, &c., principally from the same neighbourhood.

DR. HENRY DOBIE exhibited a small collection of Albino Birds, which he described; and also gave dates of the arrival of Spring Migrants. DR. DOBIE also recorded the occurrence of a Corncrake, near the Estuary of the Dee, on December 23rd, 1896 [*vide Zoologist*, February, 1897, p. 86], and exhibited the specimen, which is now in the Museum Collection.

MR. ARKLE contributed notes on the re-occurrence of *Dcilephila galii*, Schiff, in 1886; and the unusual abundance of *Timandra amatoria*, Lin. in 1897.

The Curator concluded the Meeting by describing the habits and structural characters of the Lesser Horse-shoe

Bat (*Rhinolophus hipposideros*, *Bech.*), and made observations on the Raven as observed under domestication. His remarks were illustrated by a series of Photographic Slides taken from life, which were his own preparations.

1897.

April 8th—"Notes on the *Fauna* of Puffin Island," by the Curator (MR. R. NEWSTEAD); at which were given a description of the Birds and Insects found upon the Island during a visit in 1896. The Lecture was illustrated by a collection of all the species taken; including a species of Scale Insect (*Dactylopius radicum*, *Newstead*); new to Science.

W. F. J. SHEPHEARD,

APRIL 29th, 1897.

Secretary.

GEOLOGICAL.

DURING the past Session a Second Course of Free Popular Lectures on Geology has been given on alternate Thursday Evenings. The subjects of these Lectures are as follows:—

- "The Crust of the Earth; its Character and Contents."
- "Movements of the Earth's Crust, and their effects."
- "How the Earth's Surface has continually altered."
- "The Rocks of Cheshire and North Wales, and their utility."
- "The Great Ice Age and its Local Effects."
- "Some account of the earliest Human and Animal Inhabitants of our Country."

The Lectures were illustrated by Maps, Diagrams, Specimens, and Lantern Slides, many of which were specially prepared.

The Lecture on the Great Ice Age was given by MR. H. MORPHY, and the others by the Secretary of the Section.

All were well attended; but the last two evoked very great interest, especially that portion of the story of the Great Ice Age relating to this immediate neighbourhood; and the account of the Pre-Historic Lake Village and its remains, which have been recently discovered at Glastonbury, and of which several photographs were exhibited.

ALFRED W. LUCAS,

APRIL 29th, 1897.

Secretary.

NATURAL PHILOSOPHY.

DURING the last Session a Course of Six Popular Lectures has been given in place of the ordinary Sectional Meetings.

These Lectures were as follows:—

- "Electric Lighting and Power"—DR. KEITH.
- "Some Modern Applications of Chemistry to Medicine"—DR. SCHIDROWITZ.
- "Ancient Chemistry, Alchemy, and the Alchemists"—MR. J. BAIRSTOW, F.C.S.
- "Popular Beverages"—MR. J. WELSH, M.P.S.
- "Food: Its Analysis and Adulteration"—THE SECRETARY.
- "Coal: What we get from it"—MR. J. BAIRSTOW, F.C.S.

The Lectures were all well illustrated with experiments, and were very fairly attended; it is intended to continue them next Winter, if the Committee thinks fit.

Special thanks are due to MR. BAIRSTOW, both for his own Lectures, and for the trouble he has taken in inducing others to Lecture.

W. F. LOWE,
Secretary.

APRIL 29th, 1897.

PHOTOGRAPHIC.

IT has only been possible to hold three Meetings during the Session 1896-7. They have been well attended and of considerable interest.

1897.

Jan. 12—Exhibition of Lantern Slides by Members of the Section.

Feb. 26—Exhibition of "*The Amateur Photographer*" Prize Lantern Slides, 1896.

April 22—Annual Meeting of Members. Lecture—"Pictorial Photography," by MR. A. HORSLEY HINTON, Editor of "*The Amateur Photographer*."

CASH STATEMENT.

RECEIPTS.	£	s.	d.	PAYMENTS.	£	s.	d.
Balance from 1895	0	10	8½	Postages	0	1	5
Subscriptions	0	15	0	Booking Fees (Prize Slides), &c. ..	0	3	6
				Carriage ditto ..	0	2	9
				Balance..	0	18	0½
	£1	5	8½		£1	5	8½

J. H. SPENCER,
Secretary.

APRIL 29th, 1897.

LITERATURE.

ON November 12th, 1896, a Paper was read by the REV. F. S. M. BENNETT, M.A., on "English Controversial Pamphlets of the Seventeenth Century." The Paper was of a very interesting character, and there was a fair attendance. There has been no other meeting of the Section.

ARTHUR H. FISH,

APRIL 29th, 1897.

Secretary.

ASTRONOMICAL.

DURING the past Session the Members of the Astronomical Section have been as fully engaged upon observational work as the almost continuously cloudy weather has permitted.

Under the generally adverse conditions which have prevailed, there has been but little to discuss at Meetings.

SIR ROBERT BALL lectured to a crowded audience, on the Recent Eclipse Expedition, at the opening of the Session; and at the following General Meeting of the Society MR. LONGBOTTOM continued this interesting subject.

On February 22nd a Worker's Meeting was held, at which reports of the work undertaken by the Section during the Winter were received and discussed.

HERBERT DOBIE, M.D.,

APRIL 29th, 1897.

Secretary.

PAXTON SOCIETY.

DURING the past year the usual Course of Saturday Evening Meetings have been held, at which the following Papers were read :—

1897.

Jan. 9—"From Chester to Paris *via* the Channel Islands, Normandy, and Brittany, with special reference to their Horticultural resources" (illustrated by Lime-light Pictures), by MR. G. P. MILN.

„ 23—"Roses," by REV. LIONEL GARNETT.

Feb. 6—"Flowers and their fertilization" (illustrated by Lime-light Pictures), by MR. J. D. SIDDALL.

„ 20—"Gardeners of Antiquity," by REV. F. S. M. BENNETT.

Mar. 6—Conversational discussion on Chrysanthemums. Introduced by MR. JOHN WYNNE FFOULKES.

„ 20—"Spring Flowers," by MR. E. J. BAILLIE, F.L.S.

April 3—"The Art of Modelling Fruits and Vegetables in Plaster of Paris" (with practical demonstrations), by MR. R. NEWSTEAD, F.E.S.

The average attendance of Members at these Meetings was better than in any previous Session, and the liveliest interest continues to be taken in all branches of Horticulture.

The Annual Fruit and Chrysanthemum Exhibition, held under the auspices of this Society, is now recognised as one of the best Exhibitions of its kind in the provinces; and there is abundant evidence to show that the holding of this Exhibition has done a great deal towards encouraging Fruit Culture throughout Cheshire and North Wales.

A new feature which was introduced at the last Exhibition to bring Growers and Consumers into direct contact with each other was generally appreciated.

N. F. BARNES, *President*.

G. P. MILN, *Secretary*.

NOTE.—The Annual Fruit and Chrysanthemum Exhibition will be held in the Town Hall, Chester, on 16th & 17th November, 1897. Schedules of Prizes and all particulars may be had from the Hon. Secretary, or from any Member of Committee.

"KINGSLEY MEMORIAL" FUND.

STATEMENT OF ACCOUNT for the Year ended 30th April, 1897.

Dr.		Cr.	
	£ s. d.		£ s. d.
1896-97.		1896-97.	
To Balance..	10 7 8	By Amount awarded to Mr. Alfred Newstead as Special Prize	5 5 0
" Amount received from Great Western Railway Company—Dividend	17 8 0	" Amount paid for Printing Slips as to Prizes	0 4 6
" Amount allowed by Bankers as Interest	0 1 8	" Amount paid for 500 copies of Catalogue of Books in Natural Science Society's Library	14 2 6
		Balance	8 5 4
	<u>£27 17 4</u>		<u>£27 17 4</u>
To Balance in Bank	8 5 4		

EDMUND J. BAILLIE,
HON. TREASURER.

14th APRIL, 1897—Audited and found correct,
J. H. A. HALL,
AUDITOR.

JUBILEE PRIZES (£5 each.)

The President (MR. T. SHEPHEARD, F.R.M.S.) offers the following Prizes for Microscopical Slides :—

1. **Botany.**—To illustrate the structure of different parts of Plants, either by using stains or not; this section may include *Desmids*, *Diatoms*, *Conferve*, and all Microscopical Plants. (The definition as to Plant and Animal being left to the Adjudicators.)
2. **Geology.**—Slides which best illustrate Rocks (both Crystalline and Fossiliferous) mounted as Polariscope objects or otherwise.
3. **Zoology.**—To illustrate muscular and nerve tissue; injected preparations to show the Veins and Arteries *in situ*; both Sea and Fresh-water Microzoa, such as *Polyzoa*, *Rotifera*, *Hydrozoa*, *Medusa*, and *Sponges*, mounted to show their cilia and tentacles extended as described in "Cole's Modern Microscopy," a copy of which is in the Museum Library.

Each Slide must be mounted by the Competitor, and labelled "Jubilee," with a clear description of the object.

The Prize Slides shall become the property of the Society, if so determined by the Committee, and shall be exhibited at the *Conversazione* in the Autumn.

The competition to be open, not only to Members of the Society, but to Students attending the various Classes in the Grosvenor Museum, and all persons residing within the district embraced by the Society.

The Slides must be sent in to either of the General Secretaries of the Society on or before the **1st September next**.

KINGSLEY MEMORIAL PRIZES,

Open to any Resident within the Society's District.

The Committee have pleasure in announcing that a PRIZE not exceeding TEN POUNDS is offered for the most valuable COLLECTION OF OBJECTS IN ANY ONE BRANCH OF NATURAL HISTORY made in the Society's District. The amount given will be proportionate to the *quality* of the Collection.

In addition to the above Prize, the Committee have decided that, in order to encourage scientific research, they will make Grants, from year to year, of sums not exceeding TEN POUNDS, out of the Kingsley Memorial Fund, for COLLECTIONS, ESSAYS, or NOTES OF OBSERVATIONS illustrating the NATURAL SCIENCE OF THE SOCIETY'S DISTRICT.

* * All Collections must be made in Cheshire and North Wales, or the Seas adjoining thereto, by the persons competing.

The Collections, Essays, or Notes of Observations, may be sent in to either of the General Secretaries on or before 1st September, and the awards will be made at the Conversazione next succeeding the adjudication.

NOTE.—The Committee have the option of retaining the successful Collections &c., or any part of them, for the Society.

Intending Competitors can obtain all particulars, and the conditions under which the Prizes are offered, from either of the General Secretaries; and all Collections, &c., must be sent in to either of them on or before the 1st September in each year.

PAST PRESIDENTS.

1871 to 1875—REV. CHARLES KINGSLEY, CANON OF CHESTER

(*Founder of the Society.*)

1875 „, 1891—PROF. T. MCKENNY HUGHES, F.R.S.

1891-2 ALFRED O. WALKER, ESQ., J.P., F.L.S.

1892-3 HIS GRACE THE DUKE OF WESTMINSTER, K.G.

1893-4 W. M. DOBIE, ESQ., M.D., J.P., F.R.A.S.

1894-5 W. M. DOBIE, ESQ., M.D., J.P., F.R.A.S.

1895-6 H. STOLTERFOTH, ESQ., M.A., M.D., J.P.

1896-7 H. STOLTERFOTH, ESQ., M.A., M.D., J.P.

KINGSLEY MEMORIAL MEDAL,

ESTABLISHED 1877,

“*For having contributed materially to the promotion and advancement of some branch or department of Natural Science.*”—*Vide* Trust Deed.

1877—MRS. CHAS. KINGSLEY (In Memoriam)

1878—JOHN PRICE, M.A.

1879—SIR PHILIP DE MALPAS GREY-EGERTON, BART., F.R.S.

1880—PROF. T. MCKENNY HUGHES, F.R.S.

1881—D. MACKINTOSH, F.G.S.

1882—ISAAC BYERLEY, M.R.C.S., F.L.S.

1883—GEORGE W. SHRUBSOLE, F.G.S.

1884—ALFRED OSTEN WALKER, F.L.S.

1885—JOHN DAVIES SIDDALL.

1886—HENRY STOLTERFOTH, M.A., M.D.

1887—WILLIAM SHONE, F.G.S.

1888—THOMAS SHEPHEARD, F.R.M.S.

1889—THOS. RUDDY.

1890—REV. CHAS. WOLLEY-DOD, M.A.

1891—ROBERT NEWSTEAD, F.E.S.

1892—OSMUND W. JEFFS.

1893—EDMUND J. BAILLIE, F.L.S.

1894—W. MURRAY DOBIE, M.D.

1896—REV. ARTHUR H. FISH, B.A., B.Sc.

KINGSLEY MEMORIAL PRIZES,

ESTABLISHED 1877,

“*For the reward, encouragement, and the advancement of the pursuit and study of Natural Science.*”—*Vide* Trust Deed.

1878 {	HELEN SMITH	£5 {	Herbarium of Flowering Plants.
	EDWIN W. OKELL	5 {	
1879	GEORGE SHRUBSOLE ..	5	Carboniferous Fossils.
1881	E. HOPKINS	5	Cryptogamous Plants.
1882	GEORGE SHRUBSOLE ..	10	Corals of the Mountain Limestone.
1886	ROBERT NEWSTEAD ..	10	Hymenoptera.
1887	JOHN LYON DENSON ..	5	Notes on Observations illustrating the Natural Science of the Society's District.
1888	LILIAN E. TOMLIN ..	5	Coleoptera
1889 {	EDITH C. TOMLIN ..	5 {	Diptera and Hymenoptera (Terebrantia.)
	W. E. SHARP	5 {	Coleoptera.
1890	ALFRED J. NIXON	10	Land and Fresh-Water Shells.
1892	W. E. SHARP	10	Coleoptera.
1896	ALFRED NEWSTEAD	£5 5s.	Hydradeephaga (Water Beetles) and Life Histories of Insects.

SOCIETIES ASSOCIATED,

WITH WHICH THE SOCIETY EXCHANGES PUBLICATIONS.

- Academia Nacional de Ciencias de la Republica Argentina,
 Cordoba.
 Barrow Naturalists' Field Club.
 Brighton and Sussex Natural History Society.
 Bristol Naturalists' Society.
 British Association (Corresponding Society's Committee.)
 British Museum (Natural History), Cromwell Road,
 London, S.W.
 Burnley Literary and Scientific Club.
 Cardiff Naturalists' Society.
 Cassel Society of Natural Science.
 Dudley and Midland Geological and Scientific Society and
 Field Club.
 Epping Forest and County of Essex Naturalists' Field Club.
 Glasgow Natural History Society.
 Hertfordshire Natural History Society and Field Club.
 Huddersfield Naturalists' Society.
 La Société d'Histoire Naturelle de St. Wladimir á Kiew,
 Russie.
 Leeds Naturalists' Club.
 Liverpool Geological Society.
 Liverpool Geological Association.
 Liverpool Literary and Philosophical Society.
 Liverpool Microscopical Society.
 Liverpool Naturalists' Field Club.
 Liverpool Science Students' Association.
 Manchester Field Naturalists' Society.
 Manchester Geological Society.
 Manchester Microscopical Society.
 Menai Society of Natural Science.
 Northampton Natural History and Field Club.
 North Staffordshire Naturalists' Field Club and Archæological
 Society.
 Norwich Science Gossip Club.
 Nottingham Naturalists' Society.
 Patent Office Library, 25, Southampton Buildings, Chancery
 Lane, London, W.C.
 Postal Microscopical Society.
 Quekett Microscopical Society.
 Smithsonian Institution, Washington, D.C.
 The Missouri Botanical Garden, St. Louis, U.S.A.
 United States Geological Survey.
 Vatican Observatory, Rome.
 Vienna Natural History Museum.
 Wigan Literary and Scientific Society.
 Yorkshire Naturalists' Union, Leeds.

HONORARY MEMBERS.


Those marked () have read or contributed Papers at the Society's Meetings.*


Allman, Prof., F.R.S.	Ardmore, Parkstone, Dorset
*Ball, Sir Robert S., F.R.S.	Observatory, Cambridge
Barrett, Chas. G., Esq., F.E.S.	39, Linden Grove, Nunhead, London, S.E.
Candolle, Mons. Casimir De	Geneva
Cannizaro, Prof.	Rome
*Carruthers, W., Esq., F.R.S.	The British Museum, South Kensington, London, S.W.
Credner, Dr. Hermann	Leipzig
*Dawkins, Prof. W. Boyd, F.R.S.	Woodhurst, Wilmslow road, Fallowfield, Manchester
*Grindon, Leo H., Esq.	20, Cecil Street, Greenheys, Manchester
*Hicks, H., Esq., F.R.S.	Hendon Grove, Hendon, London, N.W.
Hooker, Sir J. D., K.C.S.I., F.R.S.	The Camp, Sunningdale, Ascot
*Hughes, Prof. T. McKenny, F.R.S.	Trinity College, Cambridge
*Hull, Prof., F.R.S.	20, Arundel Gardens, London, W.
*Judd, Prof. J. W., F.R.S.	Royal College of Science, South Kensington, London, S.W.
Kelvin, The Right Hon. Lord, Pres. R.S.	28, Chester square London, S.W.
*Lubbock, Sir John, Bart., M.P., F.R.S.	Down, Farnborough, Kent
*Morton, G. H., Esq., F.G.S.	209, Edge Lane, Liverpool, E.
Norman, Rev. Canon, F.R.S.	Burnmoor Rectory, Fence Houses, Durham
Oxford, The Lord Bishop of	The Palace, Cuddesdon, Oxford
Poulton, Prof. E. B., F.R.S.	Wykeham House, Oxford.
*Rae, E., Esq., F.S.A.	Court Lodge, Birkenhead
Renard, The Abbé	Curator of the Royal Museum of Natural History, Brussels
Röntgen, Prof. W. K.	Würzburg
Roscoe, Sir Henry E., F.R.S.	10, Bramham Gardens, London, S.W.
*Rudler, F. W., Esq., F.G.S.	Museum of Practical Geology, Jermyn street, London, S.W.
Sanderson, Dr. Burden, F.R.S.	64, Banbury road, Oxford
*Sorby, Dr., F.R.S.	Broomfield, Sheffield
*Vize, Rev. J. E., M.A.	Forden Vicarage, Welshpool
Wallace, Dr. A. Russell, F.R.S.	Parkstone, Dorset

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Brodrick, The Hon. Mrs. Lawrence	Coed Coch, Abergel
Cooke, Col. B. G. Davies	Colomendy, Mold
Coward, Mr. T. A.	Higher Downs, Bowdon
Day, Mr. George	Parr's Bank Limited, Knutsford
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Williams, Mr. G. J., F.G.S.	H.M. Inspector of Mines, Bangor

NOTICE.

 *THE ANNUAL SUBSCRIPTIONS are due on the 1st of May in each year. Members who have not paid for the present year are respectfully requested to forward the amount (Five Shillings) to the Hon. Treasurer, Mr. JOHN SIMON, Chemist, 4, Eastgate Row.*

 *To prevent a recurrence of a frequent misunderstanding, Members are reminded that their Names are retained on the Society's Books, and their Subscriptions considered due, until notice has been given to the contrary according to Rule 8.*

LIST OF MEMBERS.

Those marked () have read or contributed Papers at the Society's Meetings.*

Acton, Mrs.	Grove road, Wrexham
Adair, Major-General	7 Stanley place
Adams, Mr. Beresford	Shirley House, Liverpool road
Adams, Mrs.	"
Adams, Mr. Geo. F.	Ashbourne, Victoria road
Adams, Mr. J. F.	29B West Cliff, Preston
Ainsworth, Miss F.	4 Nicholas street
*Allen, Mr. Percy K.	22 Lorne street
Appleton, Mr. John	Bouverie street
Archer, Mr. W. E.	5 Lightfoot street
*Arkle, Mr. J.	Diocesan School, George street
Atkinson, Rev. Bernard N., M.A. .	Kelsall, near Chester
Avery, Mr. Geo.	Town Hall
Bailey, Mr. H. Grant	Crypt Chambers
*Baillie, Mr. E. J., F.L.S.	Woodbine, Upton
Baillie, Mrs.	"
*Bairstow, Mr. J., F.C.S.	Burley, Queen's park
Bairstow, Mrs.	"
Baker, Miss	2 Grey Friars
Ballance, Mr. W.	Upton Park
*Ballard, Mr. E. G., A.R.S.M. .	Newton, Chester
Barber, Mr. John	19 Eastgate street
Barbour, Mr. Geo., J.P.	Bolesworth Castle, Tattenhall
Barbour, Mrs.	"
Barker, Mr. A.	47 Parkgate road

Barker, Mr. R. Longueville 8 Eaton road
Barnes, Mr. N. F. Eaton Gardens, Chester
Barnes, Rev. F., B.A. Hope Villa, Raymond street
Barnsley, Mrs. Tattenhall, Chester
Barraclough, Mr. E. 9 Abbot's nook, Liverpool road
Barraclough, Mrs. " "
Barrow, Miss The Infirmary
Bassett, Miss C. E. 68 Northgate street
Baxter, Mr. Geo. Foregate street
* Bedford, Rev. J. L., M.A., F.L.S. 10 Abbey square
Bedford, Mrs. " "
Best, Rev. J. D., M.A. Diocesan Training College
Birch, Mr. H. J. Corville, Liverpool road
Birch, Miss 18 Upper Northgate street
Bird, Rev. W. R. 66 Bouverie street
Bithell, Mr. W. Messrs. Beckett & Co., Eastgate row
Blackburn, Miss F. G. Springhill, Boughton
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* Blogg, Rev. H. B., M.A. Frodsham Vicarage, Cheshire
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Cross, London
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Boden, Mr. Robt. W. Saughton Lodge, Chester
Bolland, Mrs. 23 Hough green
Bolland, Mr. Frank
Bonnalie, Mr. G. S., L.D.S., R.C.S. Upton park, Chester
Bonnalie, Mrs. " "
* Bonnalie, Mr. Fredk. J., L.D.S., R.C.S. 4 Abbey square
Bonnalie, Mrs. " "
Boscawen, Mr. Noel 2 Mulgrave street, Liverpool
Bowers, Mr. H. R., J.P. 2 Richmond place
Bowers, Mrs. " "
Bowles, Mr. T. S. 13 Hough green
Box, Mr. Henry 46 Frodsham street
Boyson, Miss Annie H. { 28 Macaulay road, Clapham Common,
London, S.W.
Bradbury, Mr. R. P. Walmore, Dee banks
Bramall, Mr. G. H. Upper Northgate street
Branscombe, Rev. H. J. 3 Abbey street
Brassey, Miss Rose Hill, Bowdon, Cheshire
Brassey, Mr. Herbert Curzon park
Brassey, Mrs. " "
Brewer, Miss E. 15 Paradise row
Brewer, Miss Anne
Bridgman, Mr. James Ewing c/o C. A. Ewing, Esq., Flookersbrook
* Broadbent, Mrs. Bache cottage
Broadbent, Miss Dorothy
Brown, Mr. C., J.P. The Folly, Flookersbrook
Brown, Miss L. E. " "
Brown, Mr. W., J.P. 18 Curzon park
* Brown, Mr. F. F., M.A. Eastgate row
Brown, Miss Constance L. 59 Upper Northgate street
Brown, Miss Marion " "
Brown, Mrs. Samuel 1 Chichester street
Brown, Mr. G. Noël 2 White friars
* Buckler, Rev. J. F., M.A. Bidston Rectory, near Birkenhead
Buckley, Mr. Wm. Ireland, F.R.G.S. The Academy, Winsford, Cheshire
Buddicom, Mr. H. W., J.P. Penbedw, Nannerch, Flintshire
Buddicom, Mrs. " "

Bullin, Mr. F., J.P., L.D.S., R.C.S... 20 Nicholas street

Bullin, Mrs. " "

Bullin, Miss E. " "

Bull, Mr. H. F. 4, Sunny bank, Queen's park

Burges, Dr. R. Evans Hoole

Burrell, Mr. T. G. 119 Foregate street

Burrows, Mr. R. Railway Inn, Brook street

Butcher, Mr. Jas. 14 Union walk

Butlin, Colonel Belmont, Chester

Butlin, Mrs. " "

Campbell, Mrs. Pitcairn Vicar's Cross, Chester

Campbell, Miss Pitcairn " "

Campbell, Mr. A. D. Pitcairn... " "

Carr, The Hon. Mrs. Richmond lodge, Boughton

Carter, Mr. T. Chemist, Boughton

Challinor, Mr. R. 32 Eaton road

Chalton, Mr. T. W. Wynstay, Hoole, Chester

Chalton, Mrs. " "

Chapman, Mr. F. W. 42 Tarvin road

Chapman, Mr. W. R. } @ Messrs. Stead & Simpson's, 11 Fore-
gate street

*Chester, The Right Rev. The Lord } The Palace, Dee Side
Bishop of }

Clarke, Miss Sybill Stanley House

Clarke, Mr. John Pasadena, Liverpool road

Clemence, Mr. S. 2 Chichester street

Clemence, Mr. Thos. Rockend, 31 Cambrian view

Clough, Miss Ashton House, New Crane street

Clough, Mr. G. F. 2 Hough green

Clough, Mrs. " "

Cockrill, Mr. C. P. Chester road, Saltney

Coe, Mr. D. 26 Lightfoot street, Bishopfields

Coe, Mr. Henry J. 4 Bold terrace

Collinge, Mr. James Kinnerton Lodge, Chester

Connah, Mr. Jas. The Laboratory, Somerset House, London, W.C.

Conway, Mr. Walter. 8 and 10 Old Bank Buildings

Cooke, Mr. J. H. 6 Queen street

Coppack, Mr. Chas. Gladwyn, Liverpool road

Coppack, Miss " "

Coppack, Miss Nellie " "

Cordery, Miss C. St. Agnes' School, Caldy, West Kirby

Cornish, Rev. J. T. } c/o Mrs. Tom Hughes, Uffington

Cornish, Mrs. } House

*Cowap, Mr. C. R. 6 Spring Gardens, Flookersbrook

Crum, Mr. W. G., J.P. Thornliebank, Glasgow

Cummings, Miss King's Buildings

*Darby, Very Rev. J. L., D.D. .. The Deanery

Davies, Miss Henrietta 69 Boughton

Davies, Mr. E. Henry 19 Francis street

Davies, Mr. Joseph " "

Davies, Mr. John Parr's Bank Limited, Chester

Davies, Mr. J. P. 75 Crane street

Davies, Miss St. Michael's Schools

Davies, Rev. Clement The Vicarage, Rhosesmor, Holywell

Davies, Mr. W. L. 6 Abbey green

Davies, Mrs. " "

Davies, Mr. James. Ivy Cottage, Love street

Day, Mr. John	.....	Bryntirion, Chichester street
Delany, Mr. John	.....	7 Lorne street (South)
Delany, Mrs.	.....	" " "
Denson, Mr. W.	.....	21 Upper Northgate street
Denson, Mrs.	.....	" " "
Denson, Miss Adelaide	.....	" " "
Denson, Mr. J. Lyon	.....	" " "
Dickson, Mr. Geo. A., J.P.	.....	Springfield, Flookersbrook
Dickson, Mrs.	.....	" "
Dickson, Miss Lavinia	.....	" "
Dickson, Mr. J. H.	.....	Upton House, Chester
Dickson, Miss	.....	" "
Dickson, Mr. S. J. R.	.....	Mayfield House, Hoole
Dickson, Mrs. W. Alfred	.....	Newton villa
Dickson, Mr. Guy Tritton	.....	" "
Digby, Miss	.....	2 Grey friars
*Dobie, Dr. W. M., J.P., F.R.A.S.	.....	Northgate House
Dobie, Miss Mabel	.....	" "
Dobie, Miss Mildred	.....	" "
Dobie, Mr. Douglas	.....	" "
*Dobie, Mr. W. H., M.B.	.....	22 Upper Northgate street
Dobie, Dr. Herbert	.....	11 St. John street
Dobie, Mrs.	.....	" "
Dod, Rev. C. Wolley, M.A., J.P.	.....	Edge Hall, Malpas
Dod, Miss Wolley	.....	" "
Dodd, Mr. W.	.....	143 St. Anne street
Dodd, Mr. John	.....	60 Cambrian crescent
Dodds, Miss M. Evelyn	.....	Thornleigh, Hough green
Dowdall, Lieut.-Col. A. P.	.....	Curzon park
Dowdall, Miss A.	.....	" "
Duckworth, Mr. Henry, F.L.S., F.G.S.	.....	Liverpool road
Duckworth, Mr. Winefyrd Lawrence H., M.A.	.....	Jesus' College, Cambridge
Duff, Dr.	.....	5 Abbey street
Dutton, Mr. George, J.P.	.....	Curzon house
Dutton, Mrs.	.....	" "
Dutton, Mrs. G. W.	.....	6 Waterloo road
Dutton, Mr. H. B.	.....	Freshfield, 27 Curzon park
Dutton, Mrs.	.....	" "
*Dutton, Mr. F. V.	.....	University College of North Wales, Bangor
Dutton, Miss M.	.....	4 Castle esplanade
Dye, Mr. Alfred B.	.....	72 Bouverie street
Edwards, Mr. F. G., M.R.C.V.S.	.....	5 Newgate street
Edwards, Mr. J.	.....	74 Foregate street
Edwards, Miss Kate	.....	36 Sealand road
Eggers, Miss	.....	4 Hough green
Elliott, Dr. John, B.S., B.Sc.	.....	24 Nicholas street
Elliott, Miss	.....	" "
Enock, Mr. C. R.	.....	15 Hough green
Enock, Mrs.	.....	" "
Enock, Miss	.....	" "
Evans-Lloyd, Col., J.P.	.....	Stanley house
*Evans, Mr. F.	.....	The Eastgate
Ewing, Mr. C. A.	.....	3 Brookside villas, Flookersbrook
Farmer, Mr. Richard	.....	36 Liverpool road
Farrimond, Mr. F. T.	.....	Sunnyside, Boughton
Ferguson, Mr. W.	.....	The Cairn, Liverpool road
Foulkes, His Honor Judge Wynne, M.A.	.....	Old Northgate house

Ffoulkes, Mr. J. Wynne	Old Northgate house
Ffoulkes, Mr. Thomas B., Junr.	8 Burlington road, Ipswich
Ffoulkes, Mr. Geo. B.	15 Chichester street
Finchett-Maddock, Mrs. H.	Cae Gwyn, Carnarvon
Finlayson, Mrs.	The Gables, Flookersbrook
Fish, Mrs.	Arnold House, Parkgate road
*Fish, Rev. A. H., B.A., B.Sc.	" "
Fleet, Mr. H.	35 Tarvin road
*Fletcher, Mr. P. H.	Woodbrae, Curzon park
Fletcher, Miss	" "
Fluitt, Miss	42 Upper Northgate street
Footner, Mr. H.	Dee banks
Footner, Mrs.	" "
Fordham, Miss	19 Raymond street
*Francis, Mr. F. E., B.Sc., Ph.D.	Kilmorey park, Hoole
Frater, Mr. Jas.	Old Bank House
Frost, Sir Thomas G., J.P.	Redcliff, Queen's park
Frost, Lady	" "
Frost, Mr. J. G., J.P.	Estyn, Sandy lane
Frost, Mrs.	" "
Frost, Mr. J. M., J.P.	Dee Lodge "
Frost, Mrs.	" "
Frost, Mr. T. Gibbons	Richmond Hill
Frost, Mrs.	" "
Gardner, Mr. W. A.	Redland House, Hough green
Gardner, Miss	" " " "
Gardner, Mr. E.	9 Abbey street
Garland, Mr. Jas.	Eaton, Chester
Garnett, Mrs.	The Rectory, Christleton
Gibson, Mr. J. M.	Buckley, <i>via</i> Chester
Gibson, Miss	5 Crane street
Gibson, Mr. John.	Wisbeach House, Glan Aber park
Gilbert, Mr. Leonard, J.P.	Egerton villa, Liverpool road
Gilbert, Mr. Egerton.	17 Eaton road
Gilbert, Mrs.	" "
Giles, Mr. E. S.	Gowymede, Vicar's Cross
Giles, Mrs.	" "
Glascodyne, Miss	11 Cambrian view "
Golder, Mr. S.	41 Liverpool road
Golder, Mr. Jas. T.	34 Eaton road
Goodman, Mr. A. E.	Oakdene, Tarvin road
Goodman, Mrs.	" "
Goodhart, Mrs. E. S.	96 Watergate flags
Grandidge, Mrs.	The Grange, Flookersbrook
*Granger, Mr. F. M., M.R.C.S., L.R.C.P.	18 Nicholas street
Grantham, Rev. H.	S. Mary's Rectory
Gray, Miss	4 Lorne street
Greenhouse, Mr. Chas.	1 Eversley park
Griffith, Mr. G. R.	30 Hough green
Griffith, Mr. G. B.	22 Queen street
Griffiths, Miss	2 Holly Bank, Queen's park
Griffiths, Mr. John.	" "
*Griffiths, Rev. T. T., M.A.	" "
Grindley, Mr. J.	3 Eastgate street
Gunton, Miss.	Rimmersfield
Haddacks, Mr. C. R.	6 Ash grove
*Hall, Mr. J. H. A.	Montrose House, Hough green
Hall, Mrs.	" "

Hall, Miss Cecile	Montrose House, Hough green
Hall, Miss Josephine	"
Hamel, Miss	Staunton House, near Coleford, Gloucester
Hamilton, Mr. A., M.R.C.S. ..	16 White friars
Hamilton, Mrs.	"
Hampson, Mr. R.	Halkyn road, Flookersbrook
Hardy, Mr. J. E.	The Blue Coat School, The Northgate
Harnaman, Mr. J. M.	Alvanley, Warrington
Harris, Mr. T.	Dee hills park
Harris, Mrs.	"
Harrison, Miss	13 Chichester street
Harrison, Mr. N.	Highfield, Curzon park
Harrison, Mrs.	"
Haswell, Mr. G. H.	Queen's park
Henderson, Mr. J. E.	19 Pathway, Queen's park
Henshaw, Mr. T. ..	The Hollies, Liverpool road
Henshaw, Miss Edith E.	"
Henshaw, Miss Florence M. ..	"
Henshaw, Mr. T. A.	27 Halkyn road, Hoole
Heppel, Miss	8 Hough green
Heppel, Miss M. E.	"
Heppel, Mrs.	Windsor lodge, Mickle Trafford
Hetherington, Mr. T.	Telegraph Department, Post Office
Hewitt, Mr. David L.	Abbey House, Northgate street
Hickman, Mr. F. F.	8 Northgate street
Hickman, Miss	17 The Groves
Higgins, Miss Eva	The Manor, Overleigh
Higgins, Miss Millie.	"
Higginson, Mr. T.	1 South view, Eaton road
Hignett, Mrs.	14 Hough green
Hignett, Mr. A. H.	"
Hignett, Mrs. T. H.	Shandon, Hough green
Hincks, Mr. H. T.	61 Northgate street
Hobday, Mr. J.	Alexandra villa, Liverpool road
Hobday, Mr. E.	"
Hobday, Mr. Jas., B.A.	22 The Groves
*Hodges, Mr. W.	31 Hough green
Hodges, Miss A. G.	"
Hodkinson, Mr. E.	35, Pepper street
Holland, Miss A. E.	2 Eversley park
Holland, Miss S. L.	"
Holland, Miss A. M.	"
Holme, Rev. Canon, M.A.	Great Budworth, Northwich
Holmes, Mr. J. G.	Belmont, Curzon park
Hopkins, Mr. T., M.B.	60 Watergate street
Hopkins, Mrs.	"
Hopley, Mr. J. H.	Chemist, Northgate street
Hostage, Mr. George B.	28 Eaton road
Hostage Mrs.	"
Hostage, Miss	22 Eaton road
Howson, Rev. J. F., M.A.	Egerton House, Upper Northgate street
Howson, Miss	"
Howson, Rev. G. J., M.A.	The Vicarage, Crewe
Hudson, Mrs. R. S.	Bache Hall, Chester
Hughes, Mrs. McKenny	18 Hills road, Cambridge
Hughes, Mrs.	Uffington House, Dee Hills
Hughes, Mr. John	47 Victoria street, Westminster, London
Hull, Mr. G. S. N.	The Cross

Humberston, Miss	Newton Hall, Chester
Humphreys, Mr. E. Noel	9 and 11 Old Bank Buildings
Hunter, Mr. Jas.	Maisonnette, Hough green
Hunter, Mr. C. P.	" "
Hutchings, Mr. J. H.	47 White friars
Jack, Mr. A. S. ..	Belle Vue, 36 Hough green
Jackson, Mr. Roger, J.P.	26 Hough green
Jackson, Miss	" "
Jayne, Mr. Roland G.	The Palace, Dee side
Jayne, Mr. K.	" "
*Jebb, Mr. G. R., C.E.	Fairfield, Great Bar, Birmingham
Jephcott, Mr. Charles, M.A.	13 Lorne street (North)
Jepson, Mr. Arthur	6 Walpole road
Johnson, Major	9 Upper Northgate street
Johnson, Mrs.	11 Bertram road, Sefton park, Liverpool
Johnson, Mr.	St. Paul's School, Boughton
*Johnson, Mr. M., L.D.S.I.	9 York villas, Lorne street
Johnson, Mr. Thomas C.	Bod Asaph, Chichester street
Johnson, Mr. Alfred	Norton villa, Upton park
Jones, Miss	The Northgate
Jones, Mrs. Edward	1 Derby place, Hoole
Jones, Mr. Jno.	5 Lorne street (North)
Jones, Mr. F. M.	" "
Jones, Mr. J. M.	Roodee Works
Jones, Mr. David Brellisford	11 St Anne street
Jones, Mr. James M.	46 Cuppin street
Jones, Mr. W. C.	26 Duke street
Kelsall, Miss H.	Abbot's court, Liverpool road
Kemp, Mr. George	59 Bridge street
Kenyon, Mr. G. A., M.B.	Flookersbrook
Kenyon, Mrs.	" "
King, Dr. H. W.	26 Nicholas street
King, Mrs.	" "
*Kingsley, Miss	10 Walton place, Hans place, London, S. W.
Knowles, Mr. E. R.	Grosvenor street
Kynnersley, Mr. E. M. Sneyd ..	Boughton lodge
Lacy, Mrs.	Moore Holme, Neston
Lamont, Mr. A.	3 City Walls (West)
Lamont, Mr. A., Junr.	" "
Lamont, Miss	" "
Lanceley, Mr. R. H.	Victoria road
Latham, Mr. J. S.	Green bank, Liverpool road
*Lawrence, Dr. A.	The Asylum, Chester
Lee, Mrs.	York cottage, 18 Garden lane
Lees, Mr. W., M.R.C.S.	The Bars
Leete, Mrs.	Vicarage road, Hoole
Lewis, Rev. J. S., M.A.	Guilsfield Vicarage, Welshpool
Little, Mr. W. E.	24 Hough green
Little, Mrs.	" "
Littler, Miss	132 Overleigh road, Handbridge
Lloyd, His Honour Sir Horatio ..	Stanley place
Lloyd, Lady	" "
Lloyd, Major Wilford	Eccleston Hill, Chester
Lloyd, Mrs.	" "
Lloyd, Mrs. E.	Abbot's mount, Liverpool road

Lloyd, Miss M. E.	13	Chichester street
Lloyd, Miss C.	56	Princess street
Lockett, Mr. H.	59	Gladstone avenue
*Lockwood, Mr. T. M., F.R.I.B.A.	80	Foregate street
Lockwood, Mrs.	7	Queen's park
Lomax, Mr. F. T.	12	Bold terrace
Long, Mrs.	2	Lumley road
*Longbottom, Mr. F. W.		Haslemere, Queen's park
Longbottom, Mrs.		" "
Lowe, Mr. G. B.	25	Hough green
Lowe, Miss C. H.		" "
*Lowe, Mr. W. F., A.R.S.M., F.I.C., F.C.S.	9	Hough green
Lowe, Mrs.		" "
Lowe, Mr. Jas. F., B.A.		Dee banks
*Lucas, Mr A. W., F.G.S.	7	Victoria pathway, Queen's park
Lyon, Rev. J., M.A.	7	Grey friars
Macdonald, Mr. G.	3	Abbey square
*Macdonald, Mr. G. E.		" "
*Macdonald, Miss Eva		" "
Maddocks, Mr. Frank	10	Pepper street
Manley, Mr. H.		Aston, Nantwich
*Manning, Mr. J. B.		The Governor's House, H.M. Prison, Pentonville, London
Manning, Miss Edith	18	Upper Northgate street
Mann, Mr. A., M.B.		Newgate street
Mann, Mrs.		" "
Marriott, Mr. J. W.		The Grosvenor Museum
Marsden, Miss	6	Grosvenor park road
Mason, Mr. F. B.	67	Parkgate road
Massie, Admiral	3	Stanley place
Matthews, Mr. W. G.		Inland Revenue Office
McEwen, Mrs.	7	Alexandra terrace, Hoole road
*McMichael, Mr. J. A., B.A., B.Sc.	24	Bouverie street
McMichael, Mrs.		" "
McIneray, Mr. A. J.	1	Allington terrace, Hoole road
Meacock, Miss		West Hey, Hough green
Meeson, Mr. W. H.	21	Bold square
Middleton, Mr. G.	1	Sandown terrace
Middleton, Mrs.		" "
Millington, Mr. C.		Victoria house, Victoria road
Mills, Mrs.		Derby house, Hoole
Mills, Mr. T.		Union Hall, Foregate street
*Miln, Mr. G. P.		Milnholme, Brook lane
Miln, Mrs.		" "
Minshull, Mr. E.		The "Northgate"
Minshull, Miss		" "
*Mitchell, Rev. J. C., B.D., F.R.A.S.		Rutland Cottage, Parkgate road
Montgomery, Rev. J. K.		Abbot's villas, Liverpool road
Montgomery, Mr. John K., B.A., B.Sc.	5	Meyrick road, Stafford
Moreton, Mr. T. W. E., M.R.C.S.		Tarvin
Morgan, Rev. J. B.		The Mount, Queen's park
Morgan, Mr. Sydney	52	Bridge street
*Morris, The Rev. Canon, D.D., F.S.A.		St. Gabriel's Vicarage, 4 Warwick square, London, S.W.

Morris, Miss Margaret	12 Stanley place
Morrison, Mrs.	16 Eaton road
Mossford, Mr. John	The Rhigi, Tattenhall
Moss, Mr. Samuel	28 Hough green
Moss, Mrs.	" "
Mostyn, Sir Pyers W., Bart.	Talacre, Holywell
Mowle, Mr. John A.	Lyndale, St. John's road, Queen's park
Mowle, Mrs.	" " "
Musgrave, Mrs.	45 White friars
Musgrave, Miss	" "
Newsome, Mr. Harold	White friars
*Newstead, Mr. R., F.E.S.	The Grosvenor Museum
Nicholls, Mr. W. A. M.	38 Eaton road
Nicholls, Mr. G. F.	12 Chichester street
Nicholson, Mr. J. M.	Liverpool road
Nicholson, Mr. R. Leonard St. Clair.	"
Niven, Mr. James	12 Seller street
Noyes, Mr. H. J.	1 Cheyney villas
*Okell, Mr. E. W.	22 Northgate street
Okell, Mr. P. H.	1 Northgate street
*Okell, Miss M. H.	Brook lane
Oldfield, Mrs.	68 Northgate street
Oldfield, Miss	Bryn Clwyd, St. Asaph
Orton, Mr. R. O., J.P.	Tattenhall, Chester
Parkes, Mr. A.	Bridge street row
Parkes, Mrs.	" "
Parry, Mr. Gilbert	Farndon hall, Chester
*Parry, Mr. T. S., M.B.	10 Upper Northgate street
Parry, Mr. Morris	21 Victoria road
Parry, Mr. Robert	Westcote, Hoole road
Parry, Miss Kate	Grosvenor street
Payne, Miss	4 Abbey green
Payne, Miss A.	" "
Perry, Miss.	Albion house, Lower Bridge street
Phillipson, Mr. J.	23 Liverpool road
Phillipson, Mr. H. G.	" "
Porter, Mrs.	Crowthorne, Childer Thornton, Chester
Potts, Mr. A., M.A.	Diocesan Training College
Powell, Mr. E.	54 Northgate street
Preston, Mr. F. M.	Abbot's grange, Liverpool road
*Price, Mr. Walmsley	26 Watergate row
Price, Miss	53 Rutland terrace, Parkgate road
Prichard, Mr. Geo.	9 The Groves
Prichard, Miss	" "
Pritchard, Mr. W.	26a St. Martin's fields
Pritchard, Mr. Harold	The Hollies, Upton park
Pye, Mr. James	Wilton house, Brook lane
Pye, Mrs.	" "
Pye, Mr. Fred. A.	16 Granville road
*Pye, Mr. T. E.	352 Stanstead road, Catford, London, S.E.
Quinn, Mr. F. J.	Princess street
Rayner, Miss	Ash grove, Wrexham road
Read, Mrs.	Kenwyn, Dee banks

Richardson, Mr. A.	Bridge street row
Roberts, Miss	Bank cottage, Neston
Roberts, Miss M.	8 Nicholas street
Roberts, Dr., J.P.	8 Abbey square
Roberts, Miss Johnson	7 Lumley road, Liverpool road
Roberts, Mrs.	Overleigh, Hough green
Roberts, Miss	"
Roberts, Mr. B. C., J.P.	Oakfield, Upton "
Roberts, Mr. W. F.	Well house, Chester
Roberts, Mr. J. Sheriff	Curzon park
Roberts, Mrs.	"
Roberts, Mr. J.	9 Lightfoot street
Roberts, Mr. T.	32 St. Martin's-in-the-fields
Roberts, Rev. H. D.	9 Chichester street
Rogers, Mr. James	The Cross
Rogers, Mr. W.	Watergate flags
Rogerson, Mr. G. H.	Polefield, Liverpool road
Royle, Mrs.	Hough Green House
Ryde-Jones, Mr. T.	Union Bank House, The Bars
Sandbach, Mr. S. H. J.P.	Cherry hill, Malpas
*Sandford, Mrs. Henry	Queen's School
Sant, Mr. T.	Frodsham
*Schröder, Mr. W. G.	The Grosvenor Museum
Scotland, Mrs.	Vicar's lane
Scott, Mr. John	Brook lane
Scott, Rev. Canon S. Cooper, M.A.	St. John's Rectory
Segar, Mr. F., L.D S.E.	White Friars House
Shand, Miss E. M.	Kingston House
Shand, Miss E. F.	"
Sharpe, Mr. F. W.	7 Abbey square
Sharpe, Mr. Alan	"
*Shepherd, Mr. T., F.R.M.S. ..	Kingsley, Bournemouth
Shepherd, Mr. W. F. J.	Bridge street row
Shepherd, Mrs.	"
Shepherd, Mr. J. D.	National Provincial Bank, Wrexham
*Shone, Mr. W., F.G.S.	Upton park
Shone, Mrs.	"
Shone, Mr. Wm., Junr.	"
Shrubsole, Mr. Alfred	Town Hall square
*Siddall, Mr. J. D.	19 Eaton road
Siddall, Mrs.	"
Siddall, Miss Annie	"
Siddall, Miss G. M.	"
Siddall, Mr. W.	"
Simon, Mr. John	4 Eastgate row
Simpson, Mr. Ricardo	Elsinore, Curzon park
Sitwell, Mrs.	Eaton road
Sivertsen, Miss Inga.	129 Canning street, Liverpool
Smith, Mr. T., J.P.	Blacon Point, Chester
Smith, Mrs. S.	16 Nicholas street
Smith, Miss H.	3 Chichester street
Smith, Mr. John	Market square
Smith, Miss	25 Chester street, Saltney
Smith, Mr. R. J.	Aldford, Chester
Smith, Mr. T.	73 Bouverie street
Smith, Mr. W.	Glendale, Kilmorey park
Smith, Mrs.	"
Smyth, Miss Lyle.	Barrowmore Hall, near Chester

Sparling, Rev. W., M.A.	Upton Vicarage, Chester
*Spencer, Mr. J. H.	36 Bridge street
Stanyer, Mr. William	30 Newgate street
Stevens, Mr. T.	14 Eastgate row
Stewart, Mrs.	13 Stanley place
*Stolterfoth, Dr., M.A., J.P.	1 Grey friars
Stolterfoth, Mrs.	"
Stolterfoth, Miss	"
Stonex, Rev. F. Tilney, M.A. ..	Abbot's Grange, Liverpool road
Storr, Mr. F.	21 The Groves
Storr, Miss.	"
Storror, Mr. Jas., M.R.C.V.S. ...	4 Park street
Storror, Miss Jessie	"
Storror, Mr. Andrew	Bryntirion, Chichester street
Storror, Mrs. Jas.	Newgate Street House
Strong, Mr. ..	Gas Works, Chester
Sumner, Mrs. A.	South view, Eaton road
Tasker, Mr. W.	Herstfield, Hoole road
Tatlock, Rev. Canon	21 St. John street
Taylor, Mr. Hy. Enfield, J.P., M.Inst. C.E., ..	Grey friars House
Taylor, Mr. Frank.	" "
Taylor, Mr. J., F.R.C.S., J.P. ..	Haygarth House, Newgate street
Taylor, Mr. J. G.	" "
Taylor, Miss	" "
Taylor, Mr. John	Hoole Hall Gardens
Taylor, Mr. A. G.	6A Woodsome rd., Highgate rd., London, N.W.
Taylor, Mr. Hy., F.S.A.	12 Curzon park
Taylor, Mrs. G.	11 Bold square
Thomas, Mr.	18 Pepper street
Thomas, Dr. E. J. Haynes	"
Thomas, Miss	"
Thomas, Miss Constance	"
Thomas, Miss F. M.	"
Thomas, Mr. Maurice	41 Halkyn road, Hoole
Thomas, Mr. Felix	Churton road, Tarvin road
Thomas, Mr. E. H.	The Industrial Schools, Boughton
Thomas, Mr. W. C.	58 Northgate street
Thompson, Mr. Hy.	Brightholme, Curzon park
Thompson, Mrs.	" "
Thomson, Miss I.	Cambrian view
Thornthwaite, Miss E. M.	c/o Mrs. Hincks, Northgate street
Tilston, Miss	1 King's buildings
Tomkinson, Mr. Jas., J.P.	Willington Hall, Chester
Tomlin, Mrs.	Thorpe villa, Liverpool road
Tomlin, Miss Lilian Ethel	" "
Tomlin, Miss Edith Clarabel	" "
Townshend, Mr. C. W., J.P.	Trevallyn, Wrexham
Trelawny, Mr. H. D., J.P.	Shotwick park, Chester
Trelawny, The Hon. Mrs.	" "
Tushingam, Mr. T.	44 Brook street
Tyrer, Mrs. Alfred	Plas Newton, Chester
Vernon, Mr. W.	57 Upper Northgate street
Vincent, Mrs.	2 Eaton road
Wakefield, Mr. Robert	Newton Hall Gardens
Wakefield, Mr. T.	3 Lorne street
Wakefield, Miss A. E.	"

- *Walker, Mr. A. O., J.P., F.L.S. . Nant-y-Glyn, Colwyn Bay
 Walker, Mrs. " "
 Walker, Miss 23 Liverpool road "
 Ward, Miss 18 Eaton road
 Watts, Mr. C. T. F. The Grosvenor Museum
 Way, Mr. N. A. E. 1 Stanley street
 Weaver, Mr. W. M. Westminster buildings
 Weaver, Mr. Thos. Fern Cottage, Christleton
 *Webster, Mr. G. Watmough, F.C.S. . Brook lodge, Brook lane
 Webster, Mr. Sirrell M. " "
 Webster, Miss. Amy B. 30 St. Martin's-in-the-fields
 Wells, Mr. E. Eccleston, Chester
 Wells, Mr. George J. J., F.I.C. .. 77 Parkgate road
 *Welsh, Mr. John, F.C.S. 12A Sella street
 Westminster, His Grace The Duke of, K.G. . Eaton, Chester
 Westminster, Her Grace The Duchess of " "
 Whichello, Mr. H., M.R.C.S. .. The Mount, Tattenhall, Chester
 White, Miss E. 13 Abbey street
 Whiteley, Mr. F. Helsby, Warrington
 Whiteley, Miss M. L. 30 Sealand road
 Wigg, Mr. Charles Hoole bank, Chester
 Wigg, Mr. Walter J. The Firs, Newton
 Wilbraham, Miss E. 5 King's buildings
 Wilbraham, Miss F. " "
 Wilkinson, Mr. R. 49 Cambrian view
 Wilkinson, Miss Jane " "
 Williams, Mr. J. E. Westminster buildings
 Williams, Mr. John Aber cottage, Saltney
 Williams, Rev. J. R., M.A. Pulford Rectory, Wrexham
 Williams, Miss 72 Tarvin road
 Williams, Mr. R. J. 6 Eaton road
 Williams, Miss Aldersey 96 Watergate flags
 Williams, Mr. James Egerton house, Hoole road
 Williamson, Mrs. The Gables, Flookersbrook
 Wiseman, Mr. C. The Poplars, Dee banks
 Wiseman, Mr. Henry " "
 Wood, Mr. R. Stewart Eccleston, Chester
 Wood, Miss 28 Queen street
 Wood, Mr. T. H. 23 Grosvenor street
 Wood, Mrs. A. c/o Miss Tilston, 1 King's buildings
 Woodfin, Miss 26 Lorne street
 Woodward, Mrs. The Shrublands, Hoole
 Wright, Mr. A. J. 11 Bridge street row
 Wright, Mrs. " "
 *Wynne, Mr. Geo. F. Plas Gwyn, Minera, Wrexham
 Wynne, Mr. J. H. 41A Tarvin road
 Wynne, Mrs. " "
 Wynne, Mr. John Waverton, Chester
 Yeadon, Mr. Thos. 28 St. Anne street
 Yerburch, Mr. R. A., M.P. 27 Prince's Gate, London
 Yerburch, Mrs. " "




23 AUG. 97



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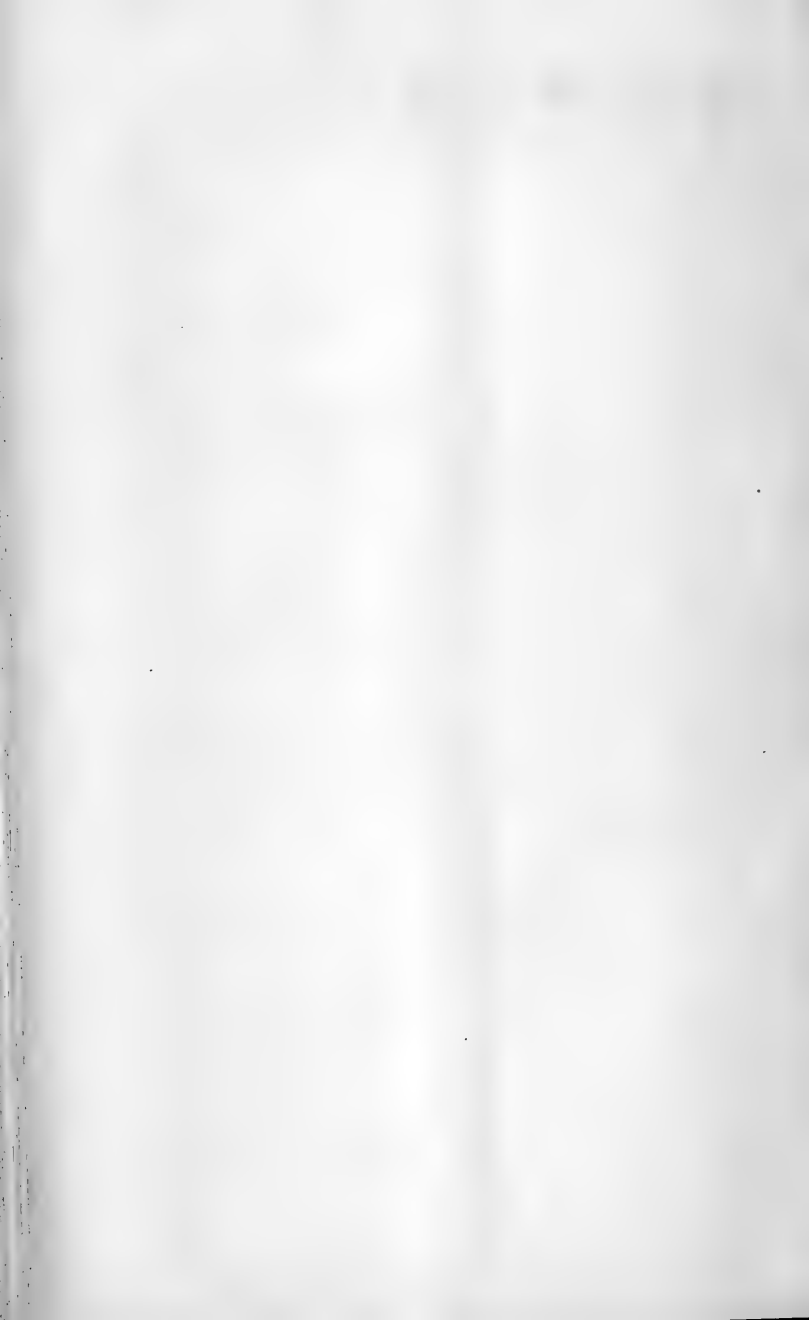
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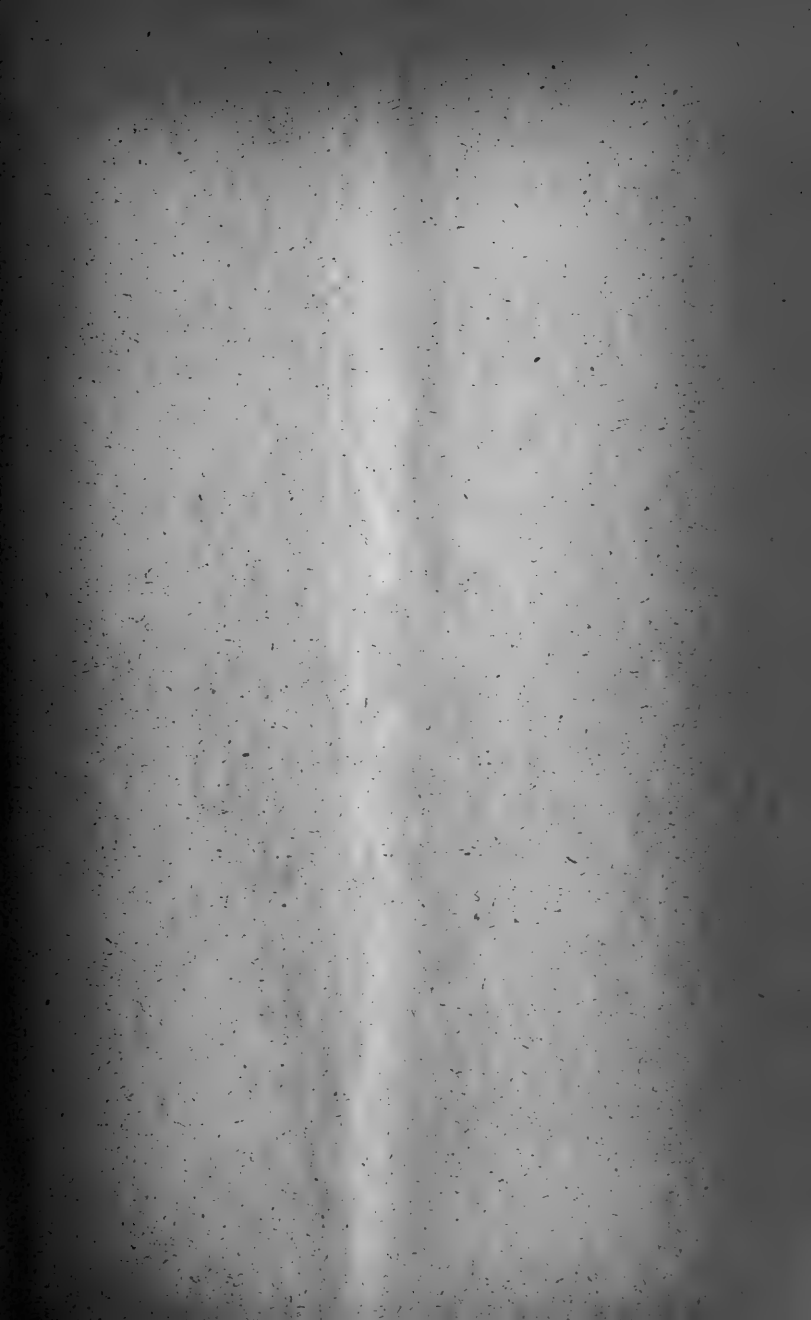
No IV. Copy (**recently published**) contains exhaustive and interesting Papers on "The Silurian Rocks of North Wales," and "Caves and Cave Deposits" (by PROF. MCKENNY HUGHES, F.R.S.); "The Chester Mysteries" (by MRS. HENRY SANDFORD); "The Climate and Natural History of the District" (by MR. A. O. WALKER, F.L.S.); "The Heron and Heronries of Cheshire and North Wales" (by MR. R. NEWSTEAD, F.E.S.); "Subterranean Erosion and some of its effects" (by MR. W. SHONE, F.G.S.); "Birds of West Cheshire, &c." (by DR. W. H. DOBIE), &c., &c.

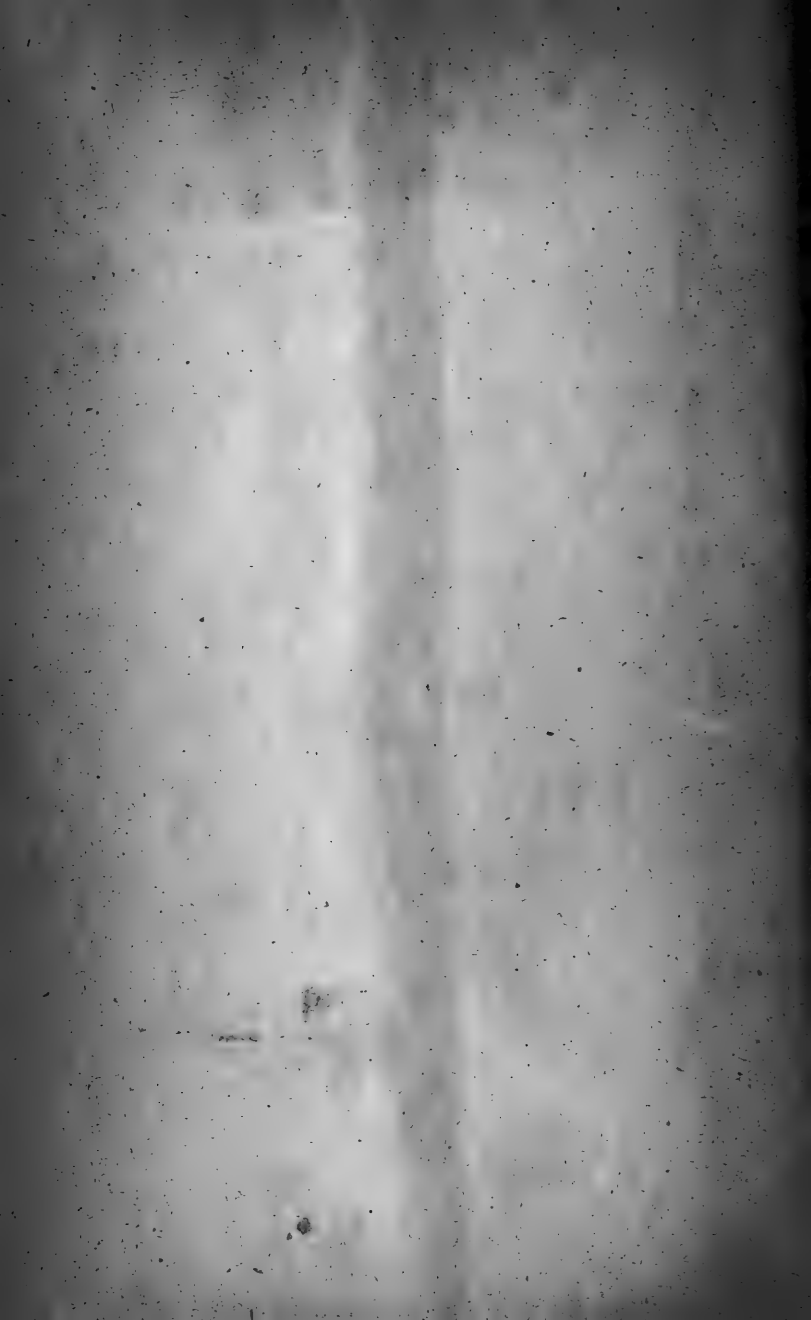
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23 AUG. 97









CHESTER

Society of Natural Science & Literature

(Founded by Charles Kingsl y, 1871.)

TWENTY-SEVENTH
ANNUAL REPORT

AND

STATEMENT OF ACCOUNTS,

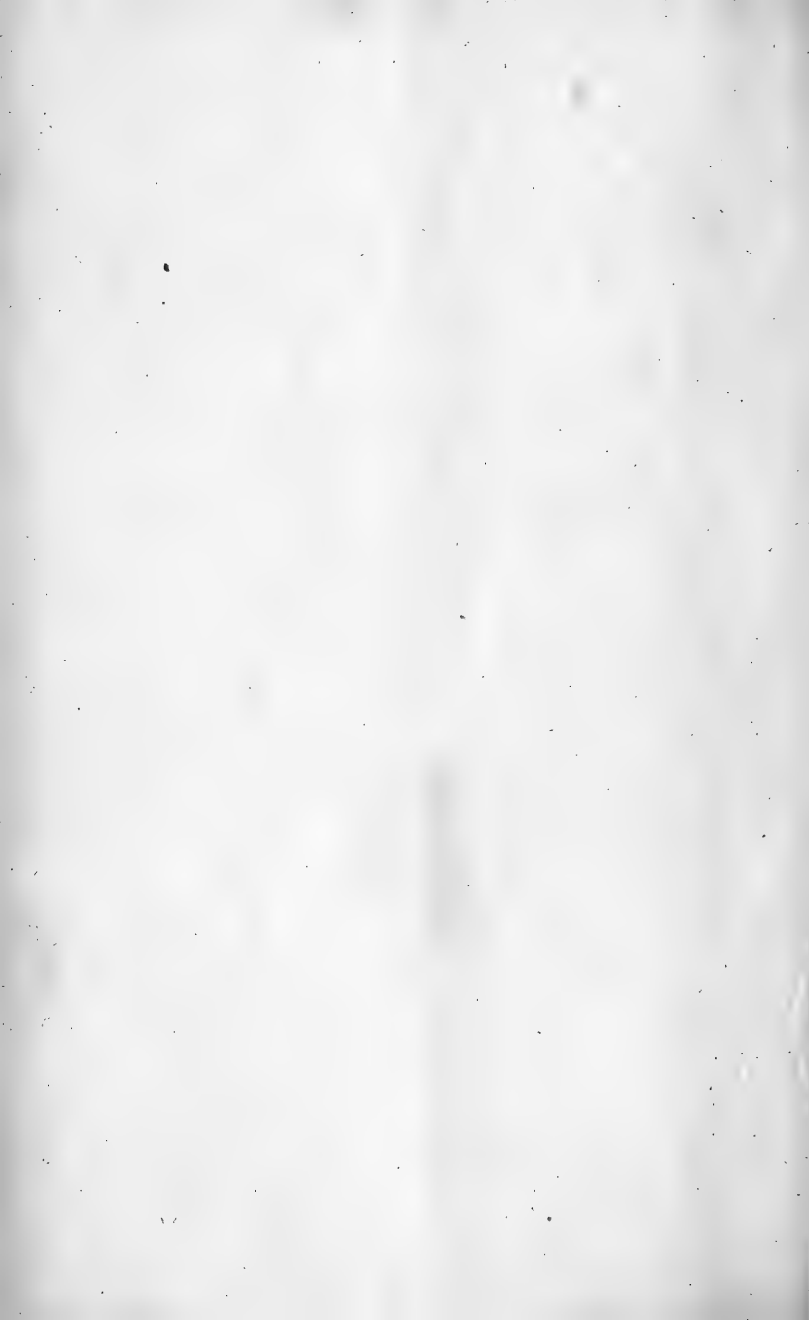
FOR THE YEAR 1897-98.



CHESTER

PRINTED BY G. R. GRIFFITH, GROSVENOR STREET.

MDCCCXCVIII.



CHESTER SOCIETY
OF
NATURAL SCIENCE AND LITERATURE

(FOUNDED BY CHARLES KINGSLEY, 1871.)

TWENTY-SEVENTH
ANNUAL REPORT

AND

STATEMENT OF ACCOUNTS FOR 1897-98,

AND THE

LIST OF MEMBERS FOR 1898-99;

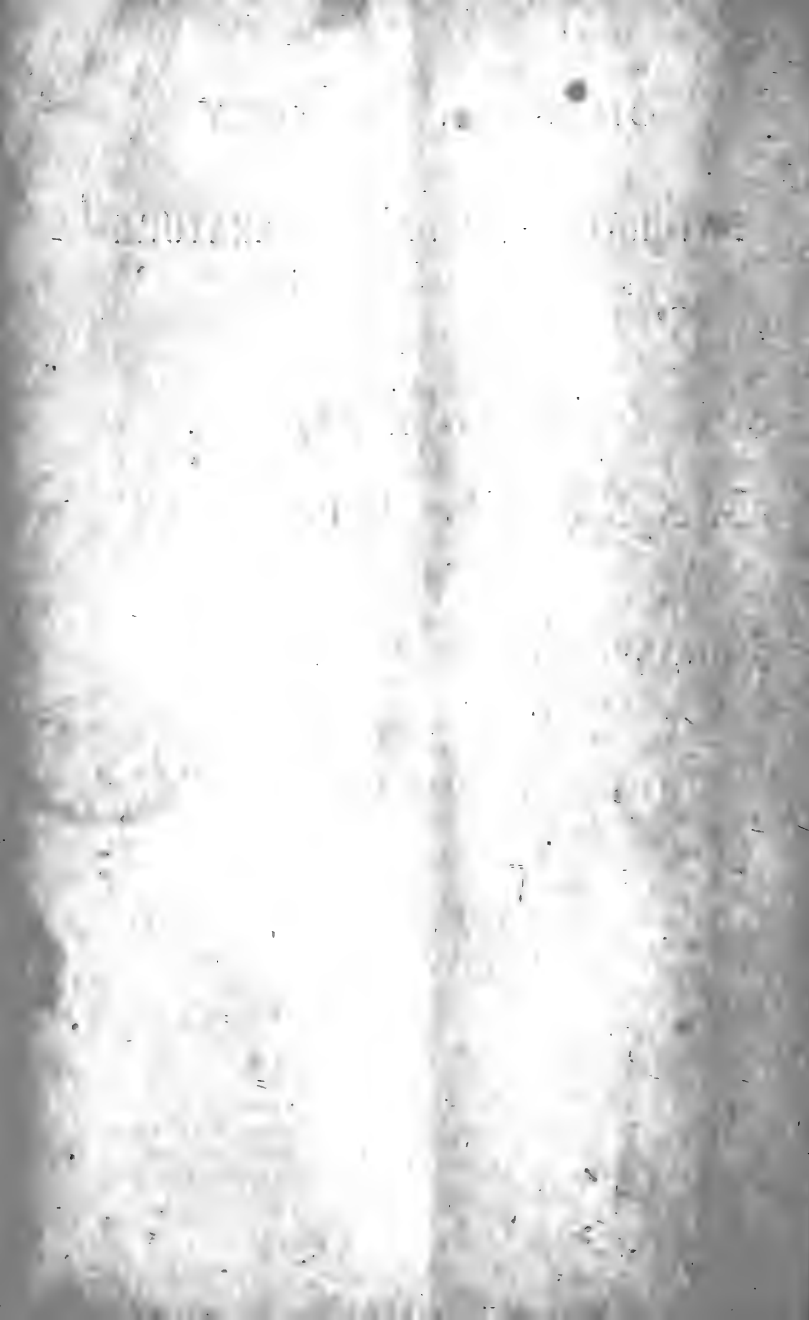
ALSO

A LIST OF THE KINGSLEY MEMORIAL PRIZES
OFFERED FOR COMPETITION, &c.



CHESTER:
PRINTED BY G. R. GRIFFITH, "THE CASTLE" PRINTING WORKS.

MDCCCXCVIII.



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{ MR. W. F. J. SHEPHEARD, Bridge Street Row.

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MR. P. H. FLETCHER, Woodbrae, Curzon Park.

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MR. J. BAIRSTOW, F.C.S.	DR. W. H. DOBIE.
MR. E. G. BALLARD, A.R.S.M.	MR. E. HODKINSON.
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MR. J. DAY.	MR. W. SHONE, F.G.S.

Hon. Auditors:

MR. BERESFORD ADAMS.	MR. C. R. ENOCK.
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MR. R. NEWSTEAD, F.E.S., *The Grosvenor Museum.*

Assistant-Secretary:

MR. T. HIGGINSON.

Representatives of the Society upon the Grosvenor Museum Management Committee.

REV. A. H. FISH, B.A., B.Sc.	MR. G. P. MILN,	MR. W. F. J. SHEPHEARD.
MR. J. D. SIDDALL.	MR. J. H. SPENCER.	MR. G. WATMOUGH WEBSTER, F.C.S.

RULES.

1.—That the Title of this Society be "*The Chester Society of Natural Science and Literature*," and that its objects be the promotion of the study of Natural Science and Literature by Lectures, Field Meetings, the Reading and Discussion of Papers, and other suitable means.

2.—That the Officers be a President, Eight Vice-Presidents, Treasurer, One Scientific Secretary, Two General Secretaries, a Chairman and Secretary for each Section (nominated by the Section), and a Librarian.

3.—That the Committee consist of the above-named Officers, and of Twelve other Members of the Society; and that the practical management of the Society be vested in such Committee, subject to the following Rules:—

4.—The name of any Candidate for Membership of the Society, with those of a Proposer and a Seconder, must be sent in writing to the Secretaries or Treasurer for the Committee, and shall be by them submitted for election at the next ensuing General Meeting; and when elected the Candidate shall become a Member upon payment of the Annual Subscription.

5.—That the Subscription be 5/- per annum, payable in advance, and due the 1st of May in each year. Any person duly elected may become a Life Member upon payment of £5.

6.—That distinguished scientific men, or any persons who may render special service to the Society, may be elected Honorary Members or Corresponding Members, on nomination by the Committee. The number of Honorary Members may not exceed Thirty.

7.—That each Member shall be allowed to introduce one *non-resident* friend at any of the General Meetings, except at the Annual General Meeting; but a Member may introduce a friend, whether resident in Chester or not, at any of the Sectional Meetings. The Chairman and Secretary of each Section, may, on application, allow a Member to introduce more than one friend to their own Sectional Meetings.

8.—That any Member desirous of withdrawing from the Society, shall give notice (in writing) to either of the General Secretaries, before the end of the financial year. In the absence of such written notice the Member shall be liable for the current year's Subscription and all arrears.

9.—The names of Members whose Subscriptions are two years in arrear, after a final application has been made by the Secretaries or Treasurer, shall be erased from the list of Members.

10.—A General Meeting shall have the power of expelling any Member whose conduct they deem objectionable, providing special notice has been given on the Society's Circular convening the Meeting, and that at least two-thirds of the Members present agree thereto.

11.—That the Committee shall meet monthly for the despatch of business. Five Members shall form a quorum.

12.—That the Committee shall arrange General Field Meetings during the year. The place of meeting shall be fixed by the Committee, and due notice be given by the General Secretaries. In case of bad weather, the Members of the Committee present shall decide whether such meetings be postponed or not.

13.—That the Committee shall also arrange at least six General Evening Meetings in the year, at which Papers shall be read and discussed. No Paper shall be read without the previous sanction of the Committee. Objects of scientific interest may be exhibited at these Evening Meetings.

14.—That the Annual General Meeting of the Society shall be held in the month of May. At this Meeting the Officers and Committee of the Society, and two Auditors for the ensuing year, shall be elected. If the number of nominations for any office exceeds the number of vacancies the election shall be by Ballot. The Officers' Reports and Financial Statement, made up to the end of April, and duly audited, shall also be submitted, and read if desired.

15.—Nominations for the Committee and Auditors shall be sent in writing to either of the General Secretaries at least ten clear days previous to the Annual General Meeting.

16.—The names of all persons to be submitted to the Annual General Meeting as Officers and Committee, and also all Financial Statements and any proposed alterations of Rules, shall be posted on the Notice Board in the Vestibule of the Museum, at least six clear days previous to the Annual General Meeting, for the information of Members, who shall be apprised of such publication on the Notice convening the Meeting.

17.—The Committee shall fill any vacancy that may occur before the next Annual General Meeting.

18.—Any proposed alterations in the above Rules shall be notified to either of the General Secretaries at least ten clear days before the Annual General Meeting, and shall only be adopted if sanctioned by at least two-thirds of the Members present. No alteration in these Rules shall otherwise be made.

ANNUAL REPORT.

THE Committee of the Chester Society of Natural Science and Literature have the pleasure of again presenting to its Members the Annual Report. The Society has now carried on its work for twenty-seven years. The past year has been remarkable for a large increase of the ordinary Members—ninety-four new names being added to the list—showing that the general usefulness of the Society, and the work which it is doing, are appreciated by our citizens.

We have to record with regret the great loss our Society has sustained during the past year in the death of its well-known Member, MR. E. J. BAILLIE, F.L.S. His admirable knowledge of Botany and Horticulture was always at the service of our Society, whilst his list of the Flora of the neighbourhood of Chester still remains as a memorial of his steady work. In addition to being a Member of our Committee, and Treasurer of the Kingsley Memorial Fund, MR. BAILLIE was one of the moving spirits and workers amongst those who brought about the erection of the Grosvenor Museum, and to the last he identified himself with all its interests, and was always ready with counsel and judicious help.

The Library and Museum are in good order, and reflect the highest credit on our Curator, MR. NEWSTEAD, who never lets an opportunity escape him of securing useful works for the Library and additions to the Museum, so that we may hope in time to have a model local collection; and here I may quote a passage from SIR W. H. FLOWER'S "Essays on Museums and other subjects connected with Natural History":—"Before long a well-arranged and well-labelled Museum will be acknowledged as a necessity in

“any well considered scheme of educational progress. The Museum and Library will go hand in hand as essential complements to each other in the advancement of Science and Art and intellectual development generally. A book without illustrations is of comparatively little value in teaching many of the most important subjects now comprised in general education. A Museum should be a book, or rather a library of books, illustrated not by pictures only, but by actual specimens of the objects spoken of.”

It may be of interest to our Members to know that the Board of Agriculture has lately been consulting our Curator on the subject of the San José Scale Insect, which at one time it was feared might become a pest in this country. MR. NEWSTEAD'S intimate knowledge of scale insects has, I hope, been of service to the Board. The study of these minute pests has been with him the work of many years, and I think our Society may be justly proud to have a Curator who is certainly one of the best living authorities on this subject.

The Kingsley Memorial Fund Account will be placed before the Meeting, with a detail as to how the Account now stands.

The Diamond Jubilee Commemoration of the 60th Year of Her Majesty's Reign, to a certain degree interrupted the usual work of our Society; but this can in no way be regretted, seeing that the peace and prosperity enjoyed during this long reign have tended materially to the advancement of Science and Art in all their branches, adding not a little to the sum of human happiness.

The financial position of the Society will be placed before you by our Honorary Treasurer, MR. JOHN SIMON.

The arrangements by which the Society carries on its work will be considered under the following heads:—EXCURSIONS, CONVERSAZIONE, LECTURES, and SECTIONAL

MEETINGS. There were six Excursions during the Season to the following places:—

1897.

May 27th.....The Coombes, Broxton.

June 11th.....Shotwick.

June 16th.....Bodorgan—Annual Excursion.

July 14thAston Hall Colliery and Hawarden.

July 19th.....Delamere Forest and Meres.

Sept. 8th.....Helsby—Works of the Telegraph Manufacturing Company, Limited.

These Excursions were well attended, and in the hope of stimulating our younger Members, our President, MR. T. SHEPHEARD, F.R.M.S., offered three prizes—in Botany, Geology, and Zoology, of £5 each. This was a very generous offer on his part, and ought to have led to some good results in the more diligent research and study of our own surroundings.

The Annual Conversazione was held on the 6th of October, 1897. There was a large gathering of Members, and the various exhibits were quite equal to those of previous years. LADY LETTICE GROSVENOR was kind enough to make the presentations. The Kingsley Memorial Medal was this year awarded to W. HENRY DOBIE, ESQ., M.B., for his admirable Paper on the Birds of the District, which has added considerably to our knowledge, and has brought into a definite group one of the most interesting of our native Fauna. The Kingsley Memorial Prize was awarded to MR. ALFRED NEWSTEAD for his collection of life-histories of Insects. The President's special Jubilee Prize was awarded to MR. A. E. GOODMAN for his collection of Microscopic Botanical preparations. In replying to a vote of thanks to LADY LETTICE GROSVENOR, GEORGE WYNDHAM, ESQ., M.P., gave us one of his interesting and instructive addresses, which are always greatly appreciated by our Members. Amongst special objects of interest, MR. SPENCER showed Ive's coloured photographs, an exhibition quite new to many of our Members.

During the past Winter there have been the following General Meetings:—

1897.

Oct. 28th—"Spiders — their Work and Wisdom," by the REV. DR. DALLINGER, F.R.S.

Nov. 25th—"The Caves of New South Wales," by the REV. H. D. ROBERTS.
1898.

Jan. 27th—"The Photochromoscope and Krömscöp, with explanations," by MR. J. D. SIDDALL.

Feb. 24th—"Life and Death of Worlds," by MRS. RICHARD A. PROCTOR.

Mar. 31st—"The Cinematograph and Photochromoscope, illustrated and explained," by MR. J. D. SIDDALL.

Apr. 28th—Exhibition of Spring Flowers, by the Paxton Society.

May 12th—Annual Meeting.

All these Lectures have been well attended. MR. SIDDALL has twice brought before the Society that most wonderful of all modern discoveries, which enables the eye to see photographs as nearly as possible in their natural colouring. Although the problem of Colour Photography has not yet been solved, we are enabled, in a measure, to guess what it will be like when the secret is revealed. Besides Ives's invention we have been able to examine coloured photos by Prof. Joly's screens.

The various Sections of the Society have met during the past winter, and a detailed report of what has been done will be furnished by the respective Secretaries.

Your Committee have met sixteen times for the carrying on of the general business of the Society. These Meetings have been well attended, and the new Members elected at the last Annual Meeting have assisted considerably in carrying on the work of the Society. It is only by the help of *all* our Members that we can ever hope to make our Society a great moving and intellectual centre in this district. Therefore, we welcome with pleasure all those who will contribute the result of their studies and their scientific investigations. Your Committee trust that they have so far arranged the affairs of the Society, as to

stimulate inquiry and promote that helpful fellowship which is sure to bring satisfactory results.

Our best thanks are due to the Officers of the Society, and those of the Sections, for the able way in which they have conducted the various departments over which they have presided during the past year.

HENRY STOLTERFOTH, M.A., M.D.,
Hon. Scientific Secretary.

MAY 12TH, 1898.

ANNUAL MEETING, MAY 12TH, 1898.

The Reports and Accounts for the past year were submitted and adopted ;

On the Motion of the retiring President (MR. T. SHEPHEARD), MR. J. D.

SIDDALL was unanimously elected President of the Society for the ensuing year, and delivered his Presidential Address ;

The list of General and Sectional Officers duly nominated for the ensuing year was submitted, and twelve Elective Members of Committee balloted for ; and a very hearty vote of thanks accorded to the Officers of the Society for their successful conduct of its affairs.



CURATOR'S REPORT.

THE following is an abstract of the Species and Specimens :—

ABSTRACT OF THE REPORT.						Species Presented and Purchased.	Total of Species.	Total of Specimens.
Geology	..	..	..	..	..	4	4	22
Botany (Plants, &c.)	..	..	..	..	..	34	34	99
Protozoa (Corals, &c.)	..	..	..	..	..	12	12	37
Diptera (Two-winged Flies)	..	..	..	..	..	14	14	19
Lepidoptera (Moths and Butterflies)	..	..	..	..	..	24	24	56
Coleoptera (Beetles)	..	..	..	..	..	29	29	44
Neuroptera (Dragon-flies, &c.)	..	..	..	..	..	1	1	1
Hymenoptera (Bees and Wasps)	..	..	..	..	..	31	31	79
Mollusca (Shells, &c.)	..	..	..	..	..	3	3	25
Pisces (Fish)	..	..	..	..	..	7	7	9
Reptilia (Snakes, &c.)	..	..	..	..	..	1	1	1
Nests and Eggs	..	..	..	..	..	20	20	84
Aves (Birds)	..	..	..	..	..	19	19	22
Mammalia (Animals)	..	..	..	..	..	5	5	6
Miscellaneous	..	..	..	..	..	—	—	40
Total	..	..	..	..	..	204	204	544

Compared with previous years, the number of additions is not great, but they include many rare and interesting species; and we are again pleased to offer our sincere thanks to those Field-Naturalists who have done so much for us in helping to build up our local collections, and in furnishing us with information relating to our Flora and Fauna. It is only by such aid that we can hope to form a thoroughly representative collection, and place on record the habitats of the plants and animals around us.

MR. ARKLE has constantly added to the *Lepidoptera*, and MR. A. O. WALKER to the *Colcoptera* and other orders. In the *Mollusca* our greatest help has come from MR. CHAS. OLDHAM; and we are also indebted to him and his colleague, MR. T. A. COWARD, for their interest in the *Mammalian* and *Avian Fauna*. We must also acknowledge our indebtedness to DRS. W. H. and HERBERT DOBIE, for their interest

in the Birds of the district, and through whose instrumentality we have been able to make the most valuable addition—from the HON. CHARLES WYNNE—of a Rough-legged Buzzard (*Buteo vulgaris*); and the valued services of MR. R. J. SMITH, in procuring for us certain desiderata, cannot be over-estimated. By purchase we have also been fortunate in procuring a specimen of the Little Gull (*Larus minutus*.)

By purchase also our Geological series has been much enriched by a notable collection of Fossil Footprints, from Storeton, which makes our series one of the finest in the country. Your Curator has also been pleased to add a slab of Saurian Footprints and Tail Tracks, from a new locality at Eddisbury.

Six glazed cases, kindly presented by MR. J. D. SIDDALL, have been fitted with a series of Geological specimens, specially selected for teaching purposes, to be loaned to institutions in the city; and we are glad to say they are now lodged at the Queen's School, where we hope they will be of educational value and interest.

LIST OF DONORS AND ADDITIONS.

GEOLOGY.

							Species.	Specimens.
Mr. Morphy	..	..	..	..	..	..	1	— 1
The Curator	..	..	..	..	..	..	1	— 1
Mr. Edward Williams	..	..	..	..	..	..	2	— 20

BOTANY (Plants, &c.)

Miss Margaret T. Griffith	31	.. 96
Mr. A. O. Walker	2	.. 2
Dr. White	1	.. 1

PROTOZOA (Corals, &c.)

Capt. C. W. Fielding	12	.. 37
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DIPTERA (Two-winged Flies.)

Mr. J. Arkle	12	.. 17
Mr. R. J. Smith	2	.. 2

LEPIDOPTERA (Moths and Butterflies.)

							Species.	Specimens.
Mr. J. Arkle	..	..	..	..	..	..	13	29
Mr. E. J. Baillie (the late)	..	..	..	..	..	..	1	1
Mr. A. E. Caldecutt	..	..	..	..	..	..	1	1
Mr. Day	..	..	..	..	..	..	1	1
Mr. Gardner	..	..	..	..	..	..	1	1
Mr. A. E. Goodman	..	..	..	..	..	..	1	2
Miss Massey	..	..	..	..	..	..	1	1
Mr. R. J. Smith	..	..	..	..	..	..	5	20

COLEOPTERA (Beetles.)

Mr. F. R. Bolland	..	..	..	..	..	..	2	5
Mr. J. F. Dutton	..	..	..	..	..	..	9	20
Mr. A. E. Goodman	..	..	..	..	..	..	1	1
Master John Newstead	2	2
Mr. A. O. Walker	15	16

NEUROPTERA (Dragon-Flies, &c.)

Mr. J. Arkle	1	1
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HYMENOPTERA (Bees and Wasps.)

Mr. J. Arkle	3	4
The Curator	4	6
Mr. J. Lyon Denson	5	15
Mr. George Dutton	..	..	..	..	..	..	1	12
Mr. Fairlie	..	..	..	..	..	..	3	3
Mr. A. E. Goodman	..	..	..	..	..	..	3	6
Mr. Shaw	..	..	..	..	..	..	1	1
Mr. Richard Simpson	..	..	..	..	..	..	1	9
Mr. R. J. Smith	..	..	..	..	..	..	9	22
Mr. William Weaver	..	..	..	..	..	..	1	1

MOLLUSCA (Shells, &c.)

Mr. Chas. Oldham	..	..	..	..	..	..	1	6
Miss Payne	..	..	..	..	..	..	2	19

PISCES (Fish, &c.)

Mr. J. Bairstow	..	..	..	..	..	..	1	1
Rev. Thomas Cox	..	..	..	..	..	..	1	1
Dr. H. Dobie	1	1
Mr. John Guy	2	3
Mr. E. Wells	1	1
Purchased	1	2

REPTILIA (Snakes, &c.)

Mr. R. J. Smith	1	1
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NESTS AND EGGS.

						Species.	Specimens.
Dr. W. H. Dobie	1	8
Mr. Fairlie	1	3
Miss Lloyd Fletcher	1	1
Mr. Hannah ..	..	..	..	..	..	2	3
Mrs. Kenyon ..	..	..	..	..	..	1	1
Mr. R. Newstead, senr.	..	..	..	..	..	1	4
Mr. Chas. Oldham	..	..	..	..	..	2	8
Mr. Rogers ..	..	..	..	..	..	1	5
Mr. R. J. Smith ..	..	..	..	..	..	10	51

AVES (Birds.)

Mr. G. C. Alletson	..	..	..	..	..	1	1
Mr. W. H. Barnes	..	..	..	..	..	2	2
Mr. H. Denton Clark	..	..	..	..	..	1	1
Dr. W. H. Dobie ..	..	..	..	..	..	1	2
Mr. Dumfee ..	..	..	..	..	..	1	1
Rev. T. J. Evans ..	..	..	..	..	..	1	1
Mr. Garland ..	..	..	..	..	..	1	1
Mr. A. Monk ..	..	..	..	..	..	1	1
Mrs. Naylor ..	..	..	..	..	..	1	1
Mr. Roberts ..	..	..	..	..	..	1	1
Mr. Shaw ..	..	..	..	..	..	1	1
Mr. R. J. Smith ..	..	..	..	..	..	3	5
Mr. Weaver ..	..	..	..	..	..	1	1
Mr. E. Wells ..	..	..	..	..	..	1	1
His Grace The Duke of Westminster	..	..	..	..	..	1	1
The Hon. Charles Wynne	..	..	..	..	..	1	1
Purchased ..	..	..	..	..	..	1	1

MAMMALIA (Animals.)

Mr. E. J. Baillie (the late)	..	..	..	..	..	1	1
Mr. Chas. Oldham	..	..	..	..	..	1	2
Miss Parker ..	..	..	..	..	..	1	1
Mr. G. H. Rogerson	..	..	..	..	..	1	1
Mr. Youd ..	..	..	..	..	..	1	1

MISCELLANEOUS.

Mr. J. D. Siddall—Six Cases containing Geological Specimens, to be used for Teaching purposes.

Mr. R. J. Smith—Potato growing in (*illum*) of Mammal.

Mr. G. E. Wright—Collection of Mosses for Teaching purposes.

ROBT. NEWSTEAD, F.E.S.,

Curator.

MAY 12TH, 1898.

SECTIONAL REPORTS.

BOTANICAL.

During the past Session the Botanical Section has held a series of Five Popular Lectures in the Lecture Theatre of the Museum, which have been, on the whole, fairly well attended.

The dates, subjects of the Lectures, as well as the names of the Lecturers, are as follows:—

1897.

Nov. 4—"How to make out the Names of Wild Flowers," by MR. J. D. SIDDALL.

„ 18—"Stems and their Structure," by MR. A. E. GOODMAN.

Dec. 2—"Grains and Grasses," by MR. J. D. SIDDALL.

1898.

Jan. 6—"Ancestors of Plants," by MISS E. MACDONALD.

„ 20—"Snowdon and its Flora: a Study in Distribution," by MR. J. LLOYD WILLIAMS.

A. E. GOODMAN,

MAY 12TH, 1898.

Secretary.

ZOOLOGICAL.

Two Meetings were held on the following dates:—

1898.

Jan. 13.—Notes and Observations, by MR. A. O. WALKER, F.L.S., DR. W. H. DOBIE, MR. J. ARKLE, and the Curator (MR. NEWSTEAD.)

This was the usual Annual Meeting of the Section, and was well attended. Many of the records given by the various authors were of exceptional interest and value, and will probably form the nucleus of more extended papers hereafter. The Curator, MR. R. NEWSTEAD, exhibited a unique series of photographs from life, of the Long-eared Bat (*Plecotus auritus*); and DR. W. H. DOBIE and MR. ARKLE also exhibited specimens to illustrate their papers.

April 14.—"The American Fruit Pest Scare" (The San José Scale Insect—*Aspidiotus perniciosus*, C.) Illustrated by Lantern Slides and Specimens, by the Curator, MR. R. NEWSTEAD, F.E.S.

The Lecturer stated the American Fruit Pest Scare originated with the action of Germany in the early part of the year, when that country passed a law forbidding the importation of infested fruit, since which time nearly all

the European Governments had taken the matter into consideration. He had twice been consulted by the Board of Agriculture in the matter, and had been able to fully satisfy them that the insect had not established itself in this country either upon fruit trees or cultivated plants of any kind, whether grown in the open air or under glass, or upon indigenous plants.

MR. NEWSTEAD'S opinion is entitled to the fullest consideration, for it is based upon many years of practical experience in plant and fruit culture, and nine years of scientific investigation of the injurious insects of this country. He thinks the insect is much more likely to establish itself here on imported plants, and suggests that such consignments should be rigorously inspected by experts; but is of opinion, however, that the pest will not thrive in this country as in America, and that if it should establish itself here it will become single-brooded like all the indigenous *Coccidæ* of Great Britain.

W. F. J. SHEPHEARD,

MAY 12TH, 1898.

Secretary.

GEOLOGICAL.

During the past Session there has been one Meeting of this Section (on December 9th), when MR. A. W. LUCAS, F.G.S., gave some account of the Liassic Formation, and its exposures in Dorsetshire, Lincolnshire, and especially at Whitby in Yorkshire. Numerous interesting Fossils of the various forms of life which are characteristic of these rocks were exhibited, many of them recently brought from Whitby and the locality.

EGERTON GILBERT,

MAY 12TH, 1898.

Secretary.

NATURAL PHILOSOPHY.

During the last Session two Papers have been read in this Section, one by MR. J. A. McMICHAEL, B.A., B.Sc., on March 3rd, entitled: "Modern Developments of Electricity," and the other by MR. J. BAIRSTOW, F.C.S., "An hour in a Chemical Factory," on April 21st.

Both Papers were well illustrated with Lantern Slides (MR. McMICHAEL's being also illustrated with experiments), and were of a very interesting character. The Meetings were very fairly attended.

The Lecture on "Horseless Carriages" (February 10th), by MR. E. SHRAPNELL SMITH, was also given on a night belonging to this Section, but should perhaps be considered a General Meeting.

W. F. LOWE,
Secretary.

MAY 12TH, 1898.

MICROSCOPICAL.

This Section has held no Special Meetings during the past Session, but contributed as usual to the success of the *Conversazione* and several other Meetings when Microscopes were required.

J. D. SIDDALL,
Secretary.

MAY 12TH, 1898.

PHOTOGRAPHIC.

Although the Photographic Section as such has only been able to hold three Meetings during the Session, the Meetings of the parent Society have been of such a character as to make the Session 1897-8 in a great measure a photographer's session. At the Annual *Conversazione* the Section had an exhibition of members' work, and the *Krömscop* (Mr. Ive's method of Colour Photography) was shown and explained. The exhibition of Animated Photography by MR. SIDDALL was an attractive feature of the *Conversazione*. The Photochromoscope (Mr. Ive's instrument for throwing his colour photographs on the screen as lantern slides), has also been exhibited, together with Professor Joly's method of photography in the colours of nature. It will thus be seen that the Members of the Section have had unique opportunity to become acquainted with the latest developments of the photographic art. The Section has also, by invitation, contributed to the important Photographic Exhibition recently held in Manchester, the work comparing very favourably with that of other Societies.

LITERATURE.

MEETINGS—

1897.

Nov. 11.—“Coleridge: ‘Ancient Mariner.’”—The Secretary.

1898.

Feb. 17.—Special Meeting. Lecture on “Matthew Arnold,” with Lantern Slides.—MR. HARPER GAYTHORPE.

Mar. 24.—“The Personality of Coleridge, as reflected in his Poems.”—MRS. HENRY SANDFORD.

The Meetings have been well attended. MR. GAYTHORPE’S Lecture was illustrated by a large number of slides, illustrating places and scenes in connection with Matthew Arnold’s life and poems. A special interest was attached to the Paper on Coleridge, by the Authoress of “Thomas Poole and his friends.”

ARTHUR H. FISH,

MAY 12TH, 1898.

Secretary.

ASTRONOMICAL.

The past Session has not been specially note worthy; still it has marked some progress, and there are signs of a revival of interest in Observational Astronomy. Several of our members are engaged upon systematic work, and their influence is steadily spreading.

The officers did not feel justified in accepting all the dates for meetings so kindly placed at their disposal by the Committee, as they were anxious not to over estimate the demand for astronomical information; but the three Lectures given proved very acceptable. DR. WHICHELLO gave a most interesting one on the “Sun,” followed by MRS. PROCTOR on “Life and Death of Worlds,” and the Session concluded with MR. PLUMMER’S suggestive address on “Meteors.”

The Secretary of the Section (DR. H. DOBIE) has been compelled to resign through pressure of other duties, but will give his valued support to his successor.

F. W. LONGBOTTOM,

MAY 12TH, 1898.

Secretary.

PAXTON SOCIETY.

The Membership of this Society now exceeds 200, a number far beyond the expectations of those who started it a few years ago.

Its Annual Fruit and Chrysanthemum Exhibition is now recognised as one of the best Exhibitions of its kind in the provinces; and there is abundant evidence to show that the holding of this Exhibition has done a great deal towards encouraging Fruit Culture amongst Farmers, Cottagers, and others throughout Cheshire and North Wales.

During the past year the usual Course of Saturday Evening Meetings have been held as follows:—

1898.

Jan. 8—Social Gathering of Members and Friends.

„ 22—“Strawberry Culture,” by MR. W. DISLEY.

Feb. 5—“Grape Growing for a private establishment,” by MR. C. FLACK.

„ 19—“Forest Entomology,” with descriptive notes on Gall-mites, Beetles, Sawflies, and other injurious Insects. Illustrated by a series of Lantern Slides, by MR. A. T. GILLANDERS.

Mar. 5—“SIR JOSEPH PAXTON”—A biographical sketch, by MR. G. P. MILN.

„ 19—“Conversational discussion on the preparation, planting, and tending of an Orchard.” Introduced by Mr. J. MOSFORD, Hatton.

April 2—“Exhibition of Spring Flowers,” with conversational discussion on same. Introduced by MR. ROBT. WAKEFIELD.

The average attendance at these exceeded that of any previous Session.

N. F. BARNES,

President.

NOTE.—The Annual Fruit and Chrysanthemum Exhibition will be held in the Town Hall, Chester, on 15th & 16th November, 1898. Schedules of Prizes and all particulars may be had from the Hon. Secretary, or from any Member of Committee.

The Hon. Treasurer in account with the Chester Society of Natural Science and Literature,
for the Year ending April 30th, 1898.

Dr.		£	s.	d.	£	s.	d.
1897-8.							
By Balance from last Account	..			0	14	9	
" Subscriptions—							
634 for Year 1897-8 @ 5/-..	..	158	10	0			
30 " 1896-7 @ 5/-..	..	7	10	0			
11 " 1895-6 @ 5/-..	..	2	15	0			
Receipts from Excursions ..				168	15	0	
" Receipts from Lectures, Conversazione, &c. ..	..			23	13	8	
" Grant to Society's Natural History Museum from	..			72	0	3	
" "Kingsley Memorial Fund" ..	..			15	0	0	
Cr.							
1897-8.							
To Museum Management Committee—							
Proportion of cost of Maintenance		60	0	0			
For use of Lantern ..	..	9	6	0			
" Natural History Museum and Library							
" Printing, Stationery, &c. ..	..			36	16	2	
" Expenses in connection with Excursions ..	..			36	0	9	
" Expenses in connection with Lectures, Conversazione, &c. ..	..			23	13	3	
" Postages ..	..			71	18	10	
" Salaries—				21	16	7	
Assistant Secretary..	..	10	0	0			
Mr. Alfred Newstead ..	..	10	0	0			
" Subscriptions—							
Palæontographical Society	..	1	1	0			
Entomological Society ..	..	1	1	0			
1898—April 30th.—Balance due to Treasurer				1	9	11	
				£281	13	7	

3RD MAY, 1898—Examined and found correct,

C. R. ENOCK, C.A., }
BERESFORD ADAMS, } HON. AUDITORS.

JOHN SIMON, HON. TREASURER.

KINGSLEY MEMORIAL PRIZES

ARE OFFERED AS FOLLOWS:—

To any Resident in the Society's District.—A PRIZE not exceeding TEN POUNDS for the most valuable COLLECTION OF OBJECTS IN ANY ONE BRANCH OF NATURAL HISTORY made in the Society's District. The amount given will be proportionate to the *quality* of the Collection.

In addition to the above Prize, the Committee have decided that, in order to encourage scientific research, they will make Grants, from year to year, of sums not exceeding TEN POUNDS, out of the Kingsley Memorial Fund, for COLLECTIONS, ESSAYS, or NOTES OF OBSERVATIONS illustrating the NATURAL SCIENCE OF THE SOCIETY'S DISTRICT.

To Young People (not over 16 years old) the Children of Members, First Prize, £1 1s.; Second, 10s. 6d.; Third, 5s.; for:—

- (1) The best Collection of 100 Wild Flowers;
- (2) Ditto ditto of Land and Fresh-water Shells;
- (3) Ditto ditto of Butterflies and Moths.

All Collections must be made in Cheshire and North Wales, or the Seas adjoining thereto, by the persons competing.

The Collections, Essays, or Notes of Observations must be sent in to either of the General Secretaries on or before 1st September, and the awards will be made at the Conversazione next succeeding the adjudication.

NOTE.—The Committee have the option of retaining the successful Collections, &c., or any part of them, for the Society.

Intending Competitors can obtain all particulars, and the conditions under which the Prizes are offered, from either of the General Secretaries; and all Collections, &c., must be sent in to either of them on or before the 1st September in each year.

PAST PRESIDENTS.

1871 to 1875—REV. CHARLES KINGSLEY, CANON OF CHESTER.
(*Founder of the Society.*)

1875 „ 1891—PROF. T. MCKENNY HUGHES, F.R.S.

1891-2 ALFRED O. WALKER, ESQ., J.P., F.L.S.

1892-3 HIS GRACE THE DUKE OF WESTMINSTER, K.G.

1893-4 W. M. DOBIE, ESQ., M.D., J.P., F.R.A.S.

1894-5 W. M. DOBIE, ESQ., M.D., J.P., F.R.A.S.

1895-6 H. STOLTERFOTH, ESQ., M.A., M.D., J.P.

1896-7 H. STOLTERFOTH, ESQ., M.A., M.D., J.P.

1897-8 T. SHEPHEARD, ESQ., F.R.M.S.

KINGSLEY MEMORIAL MEDAL,

ESTABLISHED 1877,

“*For having contributed materially to the promotion and advancement of some branch or department of Natural Science.*”—*Vide Trust Deed.*

1877—MRS. CHAS. KINGSLEY (In Memoriam)

1878—JOHN PRICE, M.A.

1879—SIR PHILIP DE MALPAS GREY-EGERTON, BART., F.R.S.

1880—PROF. T. MCKENNY HUGHES, F.R.S.

1881—D. MACKINTOSH, F.G.S.

1882—ISAAC BYERLEY, M.R.C.S., F.L.S.

1883—GEORGE W. SHRUBSOLE, F.G.S.

1884—ALFRED OSTEN WALKER, F.L.S.

1885—JOHN DAVIES SIDDALL.

1886—HENRY STOLTERFOTH, M.A., M.D.

1887—WILLIAM SHONE, F.G.S.

1888—THOMAS SHEPHEARD, F.R.M.S.

1889—THOS. RUDDY.

1890—REV. CHAS. WOLLEY-DOD, M.A.

1891—ROBERT NEWSTEAD, F.E.S.

1892—OSMUND W. JEFFS.

1893—EDMUND J. BAILLIE, F.L.S.

1894—W. MURRAY DOBIE, M.D.

1896—REV. ARTHUR H. FISH, B.A., B.Sc.

1897—WILLIAM HENRY DOBIE, M.B.

KINGSLEY MEMORIAL PRIZES,

ESTABLISHED 1877,

“*For the reward, encouragement, and the advancement of the pursuit and study of Natural Science.*”—*Vide Trust Deed.*

- | | | | | |
|--------|----------------------|--------|---|--|
| 1878 { | HELEN SMITH | £5 | { | <i>Herbarium of Flowering Plants.</i> |
| | EDWIN W. OKELL | 5 | | |
| 1879— | GEORGE SHRUBSOLE .. | 5 | | <i>Carboniferous Fossils.</i> |
| 1881— | E. HOPKINS | 5 | | <i>Cryptogamous Plants.</i> |
| 1882— | GEORGE SHRUBSOLE .. | 10 | | <i>Corals of the Mountain Limestone.</i> |
| 1886— | ROBERT NEWSTEAD .. | 10 | | <i>Hymenoptera.</i> |
| 1887— | JOHN LYON DENSON .. | 5 | | <i>Notes on Observations illustrating the Natural Science of the Society's District.</i> |
| 1888— | LILIAN E. TOMLIN .. | 5 | | <i>Coleoptera.</i> |
| 1889 { | EDITH C. TOMLIN | 5 | { | <i>Diptera and Hymenoptera (Terebrantia.)</i> |
| | W. E. SHARP | 5 | | |
| 1890— | ALFRED J. NIXON | 10 | | <i>Land and Fresh-Water Shells.</i> |
| 1892— | W. E. SHARP | 10 | | <i>Coleoptera.</i> |
| 1896— | ALFRED NEWSTEAD | £5 5s. | | <i>Hydradeephaga (Water Beetles) and Life Histories of Insects.</i> |
| 1897— | ALFRED NEWSTEAD | £5 5s. | | <i>Life Histories of Insects.</i> |

SOCIETIES ASSOCIATED,

WITH WHICH THE SOCIETY EXCHANGES PUBLICATIONS.

- Academia Nacional de Ciencias de la Republica Argentina,
Cordoba.
- Barrow Naturalists' Field Club.
- Brighton and Sussex Natural History Society.
- Bristol Naturalists' Society.
- British Association (Corresponding Society's Committee).
- British Museum (Natural History), Cromwell Road,
London, S.W.
- Burnley Literary and Scientific Club.
- Cardiff Naturalists' Society.
- Cassel Society of Natural Science.
- Dudley and Midland Geological and Scientific Society and
Field Club.
- Epping Forest and County of Essex Naturalists' Field Club.
- Glasgow Natural History Society.
- Hertfordshire Natural History Society and Field Club.
- Huddersfield Naturalists' Society.
- La Société d'Histoire Naturelle de St. Wladimir á Kiew,
Russie.
- Leeds Naturalists' Club.
- Liverpool Geological Society.
- Liverpool Geological Association.
- Liverpool Literary and Philosophical Society.
- Liverpool Microscopical Society.
- Liverpool Naturalists' Field Club.
- Liverpool Science Students' Association.
- Manchester Field Naturalists' Society.
- Manchester Geological Society.
- Manchester Microscopical Society.
- Menai Society of Natural Science.
- Northampton Natural History and Field Club.
- North Staffordshire Naturalists' Field Club and Archæo-
logical Society.
- Norwich Science Gossip Club.
- Nottingham Naturalists' Society.
- Patent Office Library, 25, Southampton Buildings, Chancery
Lane, London, W.C.
- Postal Microscopical Society.
- Quekett Microscopical Society.
- Smithsonian Institution, Washington, D.C.
- The Missouri Botanical Garden, St. Louis, U.S.A.
- United States Geological Survey.
- Vatican Observatory, Rome.
- Vienna Natural History Museum.
- Wigan Literary and Scientific Society.
- Yorkshire Naturalists' Union, Leeds.

HONORARY MEMBERS.


Those marked () have read or contributed Papers at the Society's Meetings.*


Allman, Prof., F.R.S.	Ardmore, Parkstone, Dorset
*Ball, Sir Robert S., F.R.S.	Observatory, Cambridge
Barrett, Chas. G., Esq., F.E.S.	39, Linden Grove, Nunhead, London, S.E.
Candolle, Mons. Casimir De	Geneva
Cannizaro, Prof.	Rome
*Carruthers, W., Esq., F.R.S.	The British Museum, South Kensington, London, S.W.
Credner, Dr. Hermann	Leipzig
*Dawkins, Prof. W. Boyd, F.R.S.	Woodhurst, Wilmslow road, Fallowfield, Manchester
*Grindon, Leo. H., Esq.	20, Cecil street, Greenheys, Manchester
*Hicks, H., Esq., F.R.S.	Hendon Grove, Hendon, London, N.W.
Hooker, Sir J. D., K.C.S.I., F.R.S.	The Camp, Sunningdale, Ascot
*Hughes, Prof. T. McKenny, F.R.S.	Trinity College, Cambridge
*Hull, Prof., F.R.S.	20, Arundel Gardens, London, W.
*Judd, Prof. J. W., F.R.S.	Royal College of Science, South Kensington, London, S.W.
Kelvin, The Right Hon. Lord, F.R.S.	28, Chester Square, London, S.W.
*Lubbock, Sir John, Bart., M.P., F.R.S.	Down, Farnborough, Kent
*Morton, G. H., Esq., F.G.S.	209, Edge Lane, Liverpool, E.
Norman, Rev. Canon, F.R.S.	The Rectory, Houghton-le-Spring, R.S.O., Co. Durham
Oxford, The Lord Bishop of	The Palace, Cuddesdon, Oxford
Poulton, Prof. E. B., F.R.S.	Wykeham House, Oxford
*Rae, E., Esq., F.S.A.	Court Lodge, Birkenhead
Renard, The Abbé	Curator of the Royal Museum of Natural History, Brussels
Röntgen, Prof. W. K.	Würzburg
Roscoe, Sir Henry E., F.R.S.	10, Bramham Garden, London, S.W.
*Rudler, F. W., Esq., F.G.S.	Museum of Practical Geology, Jermyn street, London, S.W.
Sanderson, Dr. Burden, F.R.S.	64, Banbury road, Oxford
*Sorby, Dr., F.R.S.	Broomfield, Sheffield
*Vize, Rev. J. E., M.A.	Forden Vicarage, Welshpool
Wallace, Dr. A. Russell, F.R.S.	Parkstone, Dorset

CORRESPONDING MEMBERS.

Askew, Mr. Jas. H.	Bidston Lighthouse, Birkenhead
Brodrick, The Hon. Mrs. Lawrence	Coed Coch, Abergele
Cooke, Col. B. G. Davies	Colomendy, Mold
Coward, Mr. T. A.	Tryfan, Peel Causeway, Bowdon
Day, Mr. George	Parr's Bank Limited, Knutsford
Griffith, Mr. J. E., F.L.S., F.R.A.S.	Vronheulog, Upper Bangor, N.W.
Joachim, Mr. George	Dunedin, Otago, New Zealand
Nicholson, Mr. A. C., F.G.S.	Brondernw, Oswestry
Nixon, Mr. A. J.	Birdham School, Chichester
Oldham, Mr. C.	Romiley, near Stockport
*Reade Mr. Oswald A.	Kingsley, Alton, Hants
*Rowston, Mr. R	Palé, Corwen
*Ruddy, Mr. Thos.	Colwyn Bay
Russell, Dr.	Thorpe villa, Liverpool road
Tomlin, Mr. J. R. le B., B.A.	Heywood, Tenby
Walker, Mr. Fred.	Uttoxeter
*Wilkins, Mr. T. S.	H.M. Inspector of Mines, Bangor
Williams, Mr. G. J., F.G.S.	

NOTICE.

 **THE ANNUAL SUBSCRIPTIONS** are due on the 1st of May in each year. Members who have not paid for the present year are respectfully requested to forward the amount (Five Shillings) to the Hon. Treasurer, Mr. JOHN SIMON, Chemist, 4, Eastgate Row.

 *To prevent a recurrence of a frequent misunderstanding, Members are reminded that their Names are retained on the Society's Books, and their Subscriptions considered due, until notice has been given to the contrary according to Rule 8.*

LIST OF MEMBERS.

Those marked () have read or contributed Papers at the Society's Meetings.*

Acton, Mrs.	Grove road, Wrexham
Adair, Major-General	7 Stanley place
Adams, Mr. Beresford	Shirley House, Liverpool road
Adams, Mrs.	"
Adams, Mr. Geo. F.	Ashbourne, Victoria road
Adams, Mr. J. F.	29B West Cliff, Preston
Ainsworth, Miss F.	4 Nicholas street
*Allen, Mr. Percy K.	22 Lorne street
Appleton, Mr. John	Bouverie street
Archer, Mr. W. E.	5 Lightfoot street
*Arkle, Mr. J.	Diocesan School, George street
Atkinson, Rev. Bernard N., M.A.	Kelsall, near Chester
Avery, Mr. Geo.	Town Hall
Bailey, Mr. H. Grant	Crypt Chambers
Baillie, Mrs. E. J.	Woodbine, Upton
Baillie, Mr. Edmund	"
*Bairstow, Mr. J., F.C.S.	Burley, Queen's park
Bairstow, Mrs.	"
Baker, Miss	2 Grey friars "
Ballance, Mr. W.	Upton park
*Ballard, Mr. E. G., A.R.S.M. ..	Newton, Chester
Barber, Mr. John	19 Eastgate street
Barbour, Mr. Geo., J.P.	Bolesworth Castle, Tattenhall
Barbour, Mrs.	"
Barker, Mr. A.	47 Parkgate road "
Barker, Mr. R. Longueville	8 Eaton road
Barnes, Mr. N. F.	Eaton Gardens, Chester
Barnes, Rev. F., B.A.	Hope Villa, Raymond street
Barnsley, Mrs.	Tattenhall, Chester

Barrow, Miss	The Infirmary
Barton, Col., C.B.,	Modyn House, Liverpool road
Barton, Mrs.	" "
Bassett, Miss C. E.	68 Northgate street
Bax, Mr. P. B. Ironside	6 Stanley place
Baxter, Mr. Geo.	Foregate street
*Bedford, Rev. J. L., M.A., F.L.S.	10 Abbey square
Bedford, Mrs.	" "
Beech, Mr. A.	5 Lightfoot street
Best, Rev. J. D., M.A.	Diocesan Training College
Birch, Mr. H. J.	Corville, Liverpool road
Birch, Miss	18 Upper Northgate street
Bird, Rev. W. R.	66 Bouverie street
Bithell, Mr. W.	Messrs. Beckett & Co., Eastgate row
Blayney, Mr. A.	2 City Walls, W.
*Blogg, Rev. H. B., M.A.	Frodsham Vicarage, Cheshire
Blomfield, Admiral	{ c/o Messrs Woodhead & Co., 44, Charing Cross, London
Blower, Mr. T. B.	6 The Groves
Boden, Mr. Robt. W.	Saighton Lodge, Chester
Bolland, Mrs.	23 Hough green
Bolland, Mr. Frank	" "
Bonnalie, Mr. G. S., L.D.S., R.C.S.	Upton park, Chester
Bonnalie, Mrs.	" "
*Bonnalie, Mr. Fredk. J., L.D.S., R.C.S.	4 Abbey square
Bonnalie, Mrs.	" "
Bowers, Mr. H. R., J.P.	2 Richmond place
Bowers, Mrs.	" "
Bowers, Miss	35 Liverpool road
Bowles, Mr. T. S.	13 Hough green
Box, Mr. Henry	46 Frodsham street
Boyson, Miss Annie H.	{ 28 Macaulay road, Clapham Common, London, S.W.
Bradbury, Mr. R. P.	Walmore, Dee banks
Bramall, Mr. G. H.	4 Nicholas street
Branscombe, Rev. H. J.	1 Paradise row
Brassey, Miss	Rose Hill, Bowdon, Cheshire
Brassey, Mr. Herbert	The Limes, Curzon park
Brassey, Mrs.	" "
Brewer, Miss E.	15 Paradise row
Brewer, Miss Anne	" "
Bridgman, Mr. James Ewing	18 Cambrian road, Garden lane
*Broadbent, Mrs.	Bache Cottage
Broadbent, Miss Dorothy	" "
Brown, Mr. C., J.P.	The Folly, Flookersbrook
Brown, Miss L. E.	" "
Brown, Mr. W. J.P.	18 Curzon park
*Brown, Mr. F. F., M.A.	Eastgate row
Brown, Miss Constance L.	59 Upper Northgate street
Brown, Mr. G. Noël	2 White friars
*Buckler, Rev. J. F., M.A.	Bidston Rectory, near Birkenhead
Buckley, Mr. Wm. Ireland, F.R.G.S.	The Academy, Winsford, Cheshire
Bullin, Mr. F., J.P., L.D.S., R.C.S.	20 Nicholas street
Bullin, Mrs.	" "
Bullin, Miss E.	" "
Bull, Mr. H. F.	4 Sunny bank, Queen's park
Bull, Mrs.	" "
Burges, Dr. R. Evans	Hoole

Burrell, Mr. T. G.	119 Foregate street
Burrows, Mr. R.	Railway Inn, Brook street
Burton, Miss	Tudor Lodge, Boughton
Butcher, Mr. Jas.	20 The Groves
Butlin, Colonel	Belmont, Chester
Butlin, Mrs.	" "
Caldecott, Miss C. G.	19 Pepper street
Campbell, Mrs. Pitcairn	Vicar's Cross, Chester
Campbell, Miss Pitcairn	" "
Campbell, Mr. A. D. Pitcairn	" "
Carleton, Capt.	84 Watergate flags
Carr, The Hon. Mrs.	Richmond Lodge, Boughton
Carson, Miss L. N. A.	Bryn Estyn, Hough green
Carson, Miss C. K. L.	" "
Carter, Mr. T.	Chemist, Boughton
Cartwright, Mr. J. P.	Pool House, Flookersbrook
Challinor, Mr. R.	32 Eaton road
Chalton, Mr. T. W.	Wynstay, Hoole, Chester
Chalton, Mrs.	" "
Chapman, Mr. F. W.	42 Tarvin road
*Chester, The Right Rev. The Lord	The Palace, Dee Side
Bishop of	
Clark, Mr. Sidney	Upton Villa
Clarke, Miss Sybill	Stanley House
Clarke, Mr. John	Pasadena, Liverpool road
Clarke, Mr. W. J.	The Beeches, Upton park
Clemence, Mr. S.	2 Chichester street
Clemence, Mr. Thos.	Rockend, 31 Cambrian view
Clough, Miss	Ashton House, New Crane street
Clough, Mr. G. F.	2 Hough green
Clough, Mrs.	" "
Cockrill, Mr. C. P.	Chester road, Saltney
Cockrill, Mrs.	" "
Coe, Mr. D.	26 Lightfoot street
Coe, Mr. Henry J.	4 Bold terrace
Collinge, Mr. James	Kinnerton Lodge, Chester
Connah, Mr. Jas.	The Laboratory, Somerset House, London, W.C.
Conway, Mr. Walter	8 and 10 Old Bank buildings
Cooke, Mr. J. H.	6 Queen street
Coppack, Mr. Chas.	Gladwyn, Liverpool road
Coppack, Miss	" "
Coppack, Miss Nellie	" "
Cordery, Miss C.	St. Agnes' School, Caldy, West Kirby
Crum, Mr. W. G., J.P.	Thornliebank, Glasgow
Cummings, Miss	King's buildings
*Darby, Very Rev. J. L., D.D.	The Deanery
Davies, Miss Henrietta	69 Boughton
Davies, Mr. E. Henry	19 Francis street
Davies, Mr. Joseph	" "
Davies, Mr. John	Parr's Bank, Limited, Chester
Davies, Mr. J. P.	75 Crane street
Davies, Miss	St. Michael's School
Davies, Rev. Clement	The Vicarage, Rhosesmor, Holywell
Davies, Mr. W. L.	6 Abbey green
Davies, Mrs.	" "
Davies, Mr. James	Ivy Cottage, Love street

Davies, Mr. P. M.	.....	The Castle
Davison, Mr. Herbert	.....	Queen's park
Davison, Mrs.	.....	"
Day, Mr. John	.....	Bryntirion, Chichester street
Day, Mrs.	.....	"
Delany, Mr. John	.....7	Lorne street (South) "
Delany, Mrs.	.....	"
Denson, Mr. W.	.....21	Upper "Northgate street
Denson, Mrs.	.....	" " "
Denson, Miss Adelaide	.....	" " "
Denson, Mr. J. Lyon	.....	" " "
Dickson, Mr. Geo. A., J.P.	.....	Springfield, Flookersbrook
Dickson, Mrs.	.....	" "
Dickson, Miss Lavinia	.....	" "
Dickson, Mr. J. H.	.....	Upton House, Chester
Dickson, Miss	.....	"
Dickson, Mr. S. J. R.	.....	Mayfield House, Hoole
Dickson, Mrs. W. Alfred	.....	Newton Villa
Dickson, Mr. Guy Tritton	.....	"
Digby, Miss	.....2	Grey friars
*Dobie, Dr. W. M., J.P. F.R.A.S.	.....	Northgate House
Dobie, Miss Mabel	.....	" "
Dobie, Miss Mildred	.....	" "
*Dobie, Mr. W. H., M.B.	.....22	Upper Northgate street
Dobie, Dr. Herbert	.....11	St. John street
Dobie, Mrs.	.....	"
Dobie, Mr. Douglas	.....51	Parkgate road
Dod, Rev. C. Wolley, M.A., J.P.	.....	Edge Hall, Malpas
Dod, Miss Wolley	.....	"
Dodd, Mr. W.	.....143	St. Anne street
Dodd, Mr. John	.....60	Cambrian crescent
Donne, Mrs.	.....6	Chichester street
Donne, Miss	.....	" "
Dowdall, Lieut.-Col. A. P.	.....	Curzon park
Dowdall, Miss A.	.....	" "
Drinkwater, Dr.	.....	Wrexham
Ducker, Mr. P. J.	.....	George street
Duckworth, Mr. Henry, F.L.S., F.G.S.	.....	Liverpool road
Duckworth, Mr. Winefryd Lawrence H., M.A.	.....	Jesus' College, Cambridge
Duff, Dr.	.....5	Abbey street
Dutton, Mr. George, J.P.	.....	Curzon House
Dutton, Mrs.	.....	"
Dutton, Mrs. G. W.	.....6	Waterloo road
Dutton, Mr. H. B.	.....	Freshfield, 27 Curzon park
Dutton, Mrs.	.....	"
Dutton, Miss M.	.....4	Castle esplanade
Dutton, Mr. J. Rowe	.....	The Willows, Mollington
Dye, Mr. Alfred B.	.....72	Bouverie street
Edwards, Mr. F. G., M.R.C.V.S.	.....5	Newgate street
Edwards, Mr. J.	.....74	Foregate street
Edwards, Miss Kate	.....36	Sealand road
Eggers, Miss	.....21	Hough green
Elliott, Dr. John, B.S., B.Sc.	.....24	Nicholas street
Elliott, Miss	.....	"
Enock, Mr. C. R.	.....15	Hough green
Enock, Mrs.	.....	"
Enock, Miss	.....	"
Evans-Lloyd, Col., J.P.	.....	Stanley House

*Evans, Mr. F.....	The Eastgate
Evans, Mr. Geo. H.	The Limes, Lumley road
Ewing, Mr. C. A.....	3 Brookside villas, Flookersbrook
Fairlie, Mr. W. E.....	Vicar's Cross
Fairlie, Mrs.	" "
Farmer, Mr. Richard	36 Liverpool road
Farrimond, Mr. F. T.	Sunnyside, Boughton
Fenwick, Mr. Geo. Lee	Queen's park
Ferguson, Mr. W.....	The Cairn, Liverpool road
Ffoulkes, His Honour Judge Wynne, M.A....	Old Northgate House
Ffoulkes, Mr. J. Wynne	" "
Ffoulkes, Mr. Thomas B., Junr. .	8 Burlington road, Ipswich
Ffoulkes, Mr. Geo. B.	15 Chichester street
Finchett-Maddock, Mrs. H.	Cae Gwyn, Carnarvon
Finlayson, Mrs.	The Gables, Flookersbrook
Firman, Rev. Septimus	44 Great Mersey street, Liverpool
Fish, Mrs.	Arnold House, Parkgate road
*Fish, Rev. A. H., B.A., B.Sc. ...	" "
Fisher, Rev. O. P.	74 Bouverie street
Fleet, Mr. H.	35 Tarvin road
*Fletcher, Mr. P. H.	Woodbrae, Curzon park
Fletcher, Miss	" "
Fluitt, Miss	42 Upper Northgate street
Footner, Mrs.	Dee banks
*Francis, Mr. F. E., B.Sc., Ph.D. .	Kilmorey park, Hoole
Fraser, Mr. A. R.....	Rowton
Frater, Mr. Jas.	Stone Villa, Stone Bridge
Frater, Mrs.	" "
Frost, Sir Thomas G., J.P.....	Redcliff, Queen's park
Frost, Lady	" "
Frost, Mr. J. G., J.P.	Boughton Hall
Frost, Mrs.....	" "
Frost, Mr. J. M., J.P.	Dee Lodge
Frost, Mrs... ..	" "
Frost, Mr. T. Gibbons.....	Richmond Hill
Frost, Mrs.....	" "
Gardner, Mr. W. A.....	Redland House, Hough green
Gardner, Miss.....	" " "
Gardner, Mr. E.	9 Abbey street
Garland, Mr. Jas.	Eaton, Chester
Garnett, Mrs.	The Rectory, Christleton
Garside, Mr. Franklin	32 Hamilton street, Hoole
Garside, Miss Ethel	" "
Gibson, Mr. J. M.....	Buckley, <i>via</i> Chester
Gibson, Miss	5 Crane street
Gibson, Mr. John	Wisbeach House, Glan Aber park
Giffen, Mr. J. T. M., F.R.C.S. .	Yorkville, Boughton
Gilbert, Mr. Leonard, J.P.	Egerton Villa, Liverpool road
Gilbert, Mr. Egerton	17 Eaton road
Gilbert, Mrs.	" "
Giles, Mr. E. S.	Gowymede, Vicar's Cross
Giles, Mrs.	" "
Glascodyne, Miss	11 Cambrian view
Golder, Mr. S.	41 Liverpool road
Golder, Mr. Jas. T.	34 Eaton road
*Goodman, Mr. A. E.	Oakdene, Tarvin road
Goodman, Mrs.	" "

Goodhart, Mrs. E. S.	96	Watergate flags
Grandridge, Mrs.		The Grange, Flookersbrook
*Granger, Mr. F. M., M.R.C.S., L.R.C.P.	18	Nicholas street
Grantham, Rev. H.		S. Mary's Rectory
Gray, Miss	4	Lorne street
Greenhouse, Mr. Chas.	1	Eversley park
Greig, Mrs.	5	Victoria pathway, Queen's park
Griffith, Mr. G. R.	30	Hough green
Griffith, Mr. G. B.	22	Queen street
Griffiths, Miss	2	Holly Bank, Queen's park
Griffiths, Mr. John		" "
*Griffiths, Rev. T. T., M.A.		" "
Grindley, Mr. J.	3	Eastgate street
Gunton, Miss		Rimmersfield
Haddacks, Mr. C. R.	6	Ash grove
Haines, Mr. F. H.	101	Eastgate street
*Hall, Mr. J. H. A.		Montrose House, Hough green
Hall, Mrs.		" "
Hall, Miss Cecile		" "
Hall, Miss Josephine		" "
Hamel, Miss		Staunton House, near Coleford, Gloucester
Hamilton, Mr. A., M.R.C.S.	16	White friars
Hamilton, Mrs.		" "
Hampson, Mr. R.		Halkyn road, Flookersbrook
Hardy, Mr. J. E.		The Blue Coat School
Harris, Mr. T.		Dee Hills park
Harris, Mrs.		" "
Harrison, Miss	13	Chichester street
Harrison, Mr. N.		Highfield, Curzon park
Harrison, Mrs.		" "
Haswell, Mr. G. H.		Queen's park
Haswell, Mrs.		" "
Heeley, Miss	3	Cheyney road
Henderson, Mr. J. E.	19	Pathway, Queen's park
Henshaw, Mr. T.		The Hollies, Liverpool road
Henshaw, Miss Edith E.		" "
Henshaw, Miss Florence M.		" "
Heppel, Miss	8	Hough green
Heppel, Mrs.		Windsor Lodge, Mickle Trafford
Hetherington, Mr. T.		Telegraph Department, Post Office
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Hickman, Mr. F. F.	8	Northgate street
Higgins, Miss Eva		The Manor, Overleigh
Higgins, Miss Millie		" "
Higginson, Mr. T.	1	South view, Eaton road
Hignett, Mrs.	14	Hough green
Hignett, Mr. A. H.		" "
Hignett, Mrs. T. H.		Shandon, Hough green
Hilton, Mrs.		Talbot Hotel
Hincks, Mr. H. T.	61	Northgate street
Hobday, Mr. J.		Alexandra Villa, Liverpool road
Hobday, Mr. E.		" "
Hobday, Mr. Jas., M.B., B.A.	49	Upper Bedford place, Russell square, London, W.C.
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Hodges, Miss A. G.		" "
Hodkinson, Mrs.	35	Pepper street
Hodkinson, Mr. E.		" "
Holland, Miss A. E.	2	Eversley park
Holland, Miss S. L.		" "

Holme, Mr. S. H.	Downswood, Liverpool road
Holme, Mrs.	"
Holme, Rev. Canon, M.A.	Great "Budworth, Northwich
Holmes, Mr. J. G.	Belmont, Curzon park
Hope, Mr. H. G., M.A.	Sealand view, Canal street
Hopkins, Mr. T., M.B.	60 Watergate street
Hopkins, Mrs.	"
Hopley, Mr. J. H.	6 Northgate street
Hopton, Mrs.	6 Cheyney road
Hornby, Mr. Alex.	Leyden Villa, Louise street
Hostage, Mr. George B.	28 Eaton road
Hostage, Mrs.	"
Hostage, Miss	22 Eaton road
Howson, Rev. J. F., M.A.	Egerton House, Upper Northgate street
Howson, Miss	"
Howson, Rev. G. J., M.A.	The Vicarage, Crewe
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Hughes, Mrs. McKenny	18 Hills road, Cambridge
Hughes, Mrs.	Uffington House, Dee Hills
Hughes, Mr. John	47 Victoria street, Westminster, London
Hull, Mr. G. S. N.	19 Gladstone avenue
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Humphreys, Mr. E. Noel	9 and 11 Old Bank Buildings
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Hunter, Mrs.	"
Hunter, Mr. Jas. De Graaff	"
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Hutchings, Mr. J. H., Senr.	47 White friars
Hutchings, Mr. J. Hanmer	20 Bouverie street
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Hyde, Deaconess Violet	Diocesan Deaconess Institution
Jack, Mr. A. S.	Belle Vue, 36 Hough green
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Jackson, Miss	"
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Jayne, Mr. K.	"
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Johnson, Mrs.	11 Bertram road, Sefton park, Liverpool
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Johnson, Mr. Alfred	Norton Villa, Upton park
Johnson, Miss	St. John's road, Queen's park
Jolliffe, Mr. H. D.	Holly bank, Queen's park
Jones, Miss	The Northgate
Jones, Mrs. Edward	1 Derby place, Hoole
Jones, Mr. Jno.	5 Lorne street (North)
Jones, Mr. F. M.	"
Jones, Mr. David Brellisford	11 St. "Anne street
Jones, Mr. W. C.	26 Duke street
Joyce, Rev. G. C., M.A.	St. Deiniol's Hostel, Hawarden
Kelsall, Miss H.	Abbot's court, Liverpool road
Kemp, Mr. George	59 Bridge street
Kenyon, Mr. G. A., M.B.	Flookersbrook
Kenyon, Mrs.	"
Killon, Mr. H. B.	20 Cooper street, Manchester

- King, Dr. W. H.26 Nicholas street
 King, Mrs....." "
 *Kingsley, Miss10 Walton place, Hansplace, London, S. W.
 Knowles, Mr. E. R.....Grosvenor street
 Kynnersley, Mr. E. M. Sneyd ..Boughton Lodge

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 F.I.C., F.C.S.9 Hough green
 Lowe, Mrs..... " "
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 *Macdonald, Mr. G. E. " "
 *Macdonald, Miss Eva " "
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 Mann, Mr. A., M.B.Newgate street
 Mann, Mrs. " "
 *Manning, Mr. J. B.The Governor's House, H.M. Prison,
 Pentonville, London
 Manning, Miss Edith18 Upper Northgate street
 Marriott, Mr. J. W.....The Grosvenor Museum
 Marsden, Miss6 Grosvenor park road
 Mason, Mr. F. B.....67 Parkgate road

- Mason, Mr. J. Clarkson9 Chichester street
 Massie, Admiral3 Stanley place
 Mathews, Mr. D. H. F.Kilmorey park, Hoole
 Matthews, Mr. W. G.Inland Revenue Office
 McEwen, Mrs.7 Alexandra terrace, Hoole road
 *McMichael, Mr. J. A., B.A., B.Sc. .39 Parkgate road
 McMichael, Mrs." "
 McIneray, Mr. A. J.1 Allington terrace, Hoole road
 Meacock, MissWest Hey, Hough green
 Meeson, Mr. W. H.21 Bold square
 Middleton, Mr. G.1 Sandown terrace
 Middleton, Mrs." "
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 Millington, Mrs." "
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 Miln, Mrs." "
 Minshull, Mr. E.The Northgate
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 Newsome, Mr. Harold " "
 Newsome, Miss " "
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 Nicholls, Mr. W. A. M.38 Eaton road
 Nicholls, Miss " "
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 Nicholson, Mr. J. M.Liverpool road
 Nicholson, Mr. R. Leonard St. Clair. . " "
 Niven, Mr. James12 Sella street
 Nixon, Mrs.Bridge street row
 Noyes, Mr. H. J.1 Cheyney villas
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 Nutting, Miss F. A. " "
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 Ockleston, Mrs." "
 *Okell, Mr. E. W.22 Northgate street
 Okell, Mr. P. H.1 Northgate street

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 Oldfield, Mrs. 68 Northgate street
 Oldfield, Miss Bryn Clwyd, St. Asaph
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 Payne, Miss A. "
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 Read, Mrs. "
 Read, Miss. "
 Reynolds, Mr. G. H. Rock Mount, Liverpool road
 Reynolds, Mrs. "
 Richardson, Mr. A. Bridge street row
 Roberts, Miss. Bank Cottage, Neston
 Roberts, Miss M. 8 Nicholas street
 Roberts, Dr., J.P. 8 Abbey square
 Roberts, Miss Johnson 7 Lumley road, Liverpool road
 Roberts, Mrs. Overleigh, Hough green
 Roberts, Mr. B. C., J.P. Oakfield, Upton
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 Roberts, Mrs. "
 Roberts, Mr. J. 9 Lightfoot street
 Roberts, Mr. T. 32 St. Martin's-in-the-fields
 *Roberts, Rev. H. D. Brook Lodge, Brook lane
 Rogers, Mr. James Eastgate row (North)
 Rogers, Mr. W. Watergate flags
 Rogerson, Mr. G. H. Polefield, Liverpool road

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*Sandford, Mrs. Henry	Queen's School
Sant, Mr. T.	Frodsham
Savage, Colonel.....	The Limes, 27 Hough green
*Schröder, Mr. W. G.	Eaton road
Scotland, Mrs.	Vicar's lane
Scott, Mr. John	Brook Lane
Scott, Rev. Canon S. Cooper, M.A.	St. John's Rectory
Scott, Surgeon-Colonel, C.M.G.	Watergate House
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Shand, Miss E. F.	"
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Smith, Miss	25 Mount Pleasant, Saltney
Smith, Mr. R. J.	Aldford, Chester
Smith, Mr. T.	73 Bouverie street
Smith, Mr. W.	Glendale, Kilmorey park
Smith, Mrs.	"
Smyth, Miss Lyle	Barrowmore Hall, near Chester
Sparling, Rev. W., M.A.	Upton Vicarage, Chester
*Spencer, Mr. J. H.	36 Bridge street
Stanyer, Mr. William	30 Newgate street
Stevens, Mr. T.	14 Eastgate row
Stewart, Mrs.	13 Stanley place
Stockham, Mr. T.	5 Eastern pathway, Queen's park
Stockham, Mrs.	"
*Stolterfoth, Dr., M.A., J.P.	1 Grey friars
Stolterfoth, Mrs.	"
Stolterfoth, Miss	"

Stonex, Rev. F. Tilney, M.A.	..	Abbot's grange, Liverpool road
Storr, Mr. F.21	The Groves
Storr, Miss	"
Storrar, Miss Jessie4	Park street
Storrar, Mr. Andrew	Bryntirion, Chichester street
Storrar, Mrs. Jas.	Newgate street House
Strong, Mr.	Gas Works, Chester
Sturge, Mr. F. A.	Coed Efa, Wrexham
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Taylor, Mr. Hy. Enfield, J.P., M.Inst. C.E.	...	Grey friars House
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Thompson, Mrs.	"
Thomson, Miss I.	Cambrian view
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Tomlin, Miss Lilian Ethel	"
Tomlin, Miss Edith Clarabel	"
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Trelawny, The Hon. Mrs.	Shotwick park, Chester
Tushingham, Mr. T.44	Brook street
Tyrer, Mrs. Alfred	Plas Newton, Chester
Vernon, Mr. W.57	Upper Northgate street
Vincent, Mr. J. A.34	King street
Vincent, Mr. W. F.	"
Wakefield, Mr. Robert	Newton Hall Gardens
Wakefield, Mr. T.3	Lorne street
Wakefield, Miss A. E.	"
*Walker, Mr. A. O., J.P., F.L.S.	...	Nant-y-Glyn, Colwyn Bay
Walker, Mrs.	"
Walker, Miss23	Liverpool road

- Walley, Mrs.....Mountain view, Raymond street
 Ward, Miss18 Eaton road
 Watts, Mr. C. T. F., B.Sc.The Grosvenor Museum
 Way, Mr. N. A. E.1 Stanley street
 Weaver, Mr. W. M.Westminster buildings
 Weaver, Mr. Thos.Fern Cottage, Christleton
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 Webster, Mr. Sirrell M.
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 Westminster, Her Grace The Duchess of
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 Wilbraham, Miss F.
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 Wilkinson, Miss Jane
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 Williams, Rev. J. R., M.A.Pulford Rectory, Wrexham
 Williams, Miss72 Tarvin road
 Williams, Mr. R. J.6 Eaton road
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 Wolfenden, Miss Marion.
 Wood, Mr. R. StewartEccleston, Chester
 Wood, Miss28 Queen street
 Wood, Mr. T. H.23 Grosvenor street
 Wood, Mrs. A.c/o Miss Tilston, 1 King's buildings
 Woodfin, Miss26 Lorne street
 Woodward, Mrs.The Shrublands, Hoole
 Worcester, Miss.c/o Messrs. Brown & Co., Eastgate row
 Wright, Mr. A. J.11 Bridge street row
 Wright, Mrs.
 *Wynne, Mr. Geo. F.Plas "Gwyn, Minera, Wrexham
 Wynne, Mr. J. H.41A Tarvin road
 Wynne, Mrs.
 Wynne, Mr. JohnWaverton, Chester
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